Projection Television

Your Television's Directions for Use

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Let's make things better.

PHILIPS

3135 035 20243

Return your Warranty Registration card today to ensure you receive all the benefits you're entitled to.

Once your PHILIPS purchase is registered, you're eligible to receive all the privileges of owning a PHILIPS product. So complete and return the Warranty Registration Card enclosed with your purchase at once. And take advantage of these important benefits.

Warranty Verification

Registering your product within 10 days confirms your right to maximum protection under the terms and conditions of your PHILIPS warranty.

Owner Confirmation

Your completed Warranty Registration Card serves as verification of ownership in the event of product theft or loss.

Model Registration

Returning your Warranty Registration Card right away guarantees you'll receive all the information and special offers which you qualify for as the owner of your model.

Congratulations on your **purchase,** and welcome to the **"family!"**

PHILIPS

Dear PHILIPS product owner:

Thank you for your confidence in PHILIPS. You've selected one of the best-built, best-backed products available today. And we'll do everything in our power to keep you happy with your purchase for many years to come.

As a member of the PHILIPS "family," you're entitled to protection by one of the most comprehensive warranties and outstanding service networks in the industry.

What's more, your purchase guarantees you'll receive all the information and special offers for which you qualify, plus easy access to accessories from our convenient home shopping network.

And most importantly you can count on our uncompromising commitment to your total satisfaction.

All of this is our way of saying welcome–and thanks for investing in a PHILIPS product.

Sincerely,

Lawrence J. Blanford
President and Chief Executive Officer

P.S. Remember, to get the most from your PHILIPS product, you must return your Warranty Registration Card within 10 days. So please mail it to us right now!

Know these **safety** *symbols*

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

⚡ This "bolt of lightning" indicates uninsulated material within your unit may cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.

! The "exclamation point" calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, and fully insert.

ATTENTION: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

PHILIPS *Visit our World Wide Web Site at http://www.philips.com*

IMPORTANT SAFETY INSTRUCTIONS
Read before operating equipment

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and third grounding prong. The wide blade or third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product may contain lead and mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance: www.eiae.org
16. **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:
    - **A.** The power supply cord or the plug has been damaged; or
    - **B.** Objects have fallen, or liquid has been spilled into the appliance; or
    - **C.** The appliance has been exposed to rain; or
    - **D.** The appliance does not appear to operate normally or exhibits a marked change in performance; or
    - **E.** The appliance has been dropped, or the enclosure damaged.
17. **Tilt/Stability** - All televisions must comply with recommended international global safety standards for tilt and stability properties of its cabinet design.
    • Do not compromise these design standards by applying excessive pull force to the front, or top, of the cabinet which could ultimately overturn the product.
    • Also, do not endanger yourself, or children, by placing electronic equipment/toys on the top of the cabinet. Such items could unsuspectingly fall from the top of the set and cause product damage and/or personal injury.
18. **Wall or Ceiling Mounting** - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
19. **Power Lines** - An outdoor antenna should be located away from power lines.
20. **Outdoor Antenna Grounding** - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
    Section 810 of the National Electric Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure grounding of the lead-in wire to an antenna discharge unit, size of grounding connectors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. See Figure below.
21. **Object and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

Note to the CATV system installer: This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Example of Antenna Grounding as per NEC - National Electric Code

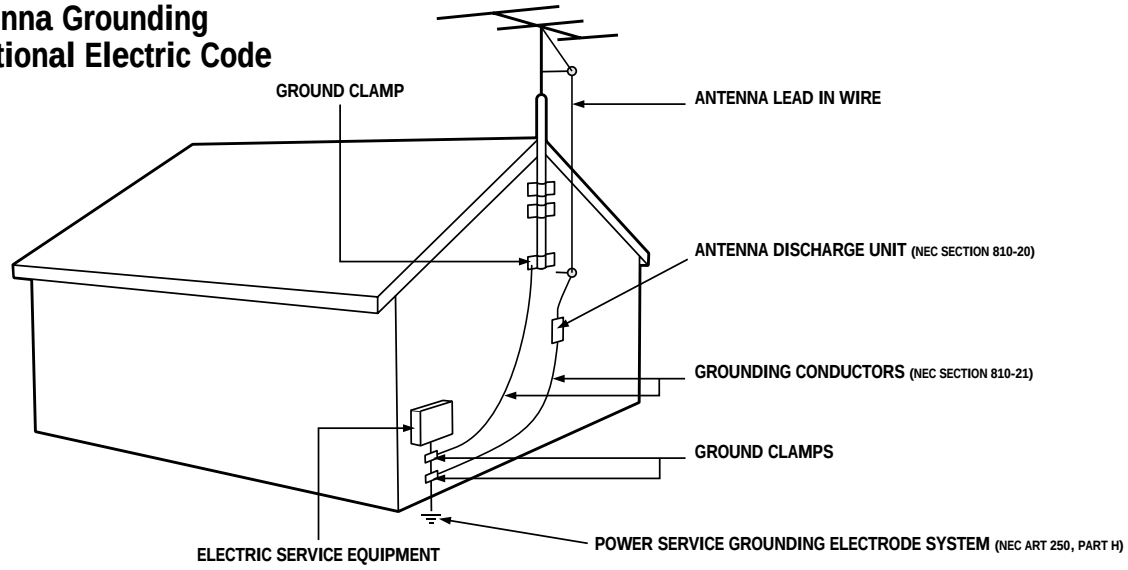

GROUND CLAMP
ANTENNA LEAD IN WIRE
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
ELECTRIC SERVICE EQUIPMENT

TABLE OF CONTENTS

GETTING STARTED

Welcome/Product Registration 2
Safety Precautions 3
Table of Contents 4
Features 5

ON-SCREEN FEATURES

PICTURE MENU

Adjusting the Picture 6
Turning on the Dynamic Noise Reduction (DNR) Control 7
Turning on the ImageMax Control 8
The Convergence Control:
- Converge Red/Blue 9
- Converge Multipoint Red/Blue 10–11
- Undo Multipoint 12

FEATURES MENU

The Timer Control:
- Setting the Clock 13
- Setting the Start Time 14
- Setting the Stop Time 15
- Selecting the Channel 16
- Selecting the Tuner 17
- Setting the Activate Control 18
- Constantly Displaying the Time on Screen 19

The AutoLock Control:
- Understanding AutoLock 20
- Setting up the Access Code 21
- Blocking Channels 22
- Blocking by Movie Rating 23
- Blocking by TV Rating 24
- Turning the Blocking Control on or off 25
- Blocking Unrated Broadcasts 26
- Blocking Broadcasts That Have No Rating 27
- Reviewing Your Settings 28
- Clearing All Blocked Channels 29

Using the Closed Captioning Control 30

SOUND MENU

Adjusting the Treble, Bass, and Balance 31
Using the AVL (Audio Volume Leveler) Control 32
Using Incredible Surround 33
Setting the TV for Stereo and SAP 34
Setting the Audio Out Control 35
Using the TV Speaker Control and Audio Outputs 36
Using the Bass Boost Control 37

REMOTE CONTROL

Using AutoPicture 38
Using AutoSound 39
Using Surf, Alternate Channel, and Program List 40
Using the Sleep Timer Control 41
Using the Volume Buttons 42
Using the AV Button 43
Setting the TV Remote to Work Accessory Devices 44–48

THE PICTURE-IN-PICTURE (PIP) FEATURE

Using PIP (Basic Connections) 49
Selecting the PIP Signal Source 50
Using the PIP Remote Control Buttons 51
Adjusting the PIP Color and Tint Controls 52

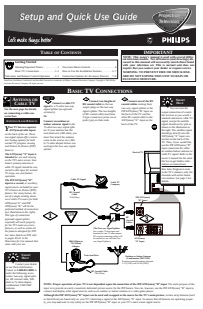
GENERAL INFORMATION

Using Connection Options 53–54
Helpful Hints 55
Glossary of Television Terms 56
Index 57
Limited Warranty 58

SETUP AND QUICK USE GUIDE

Refer to the simple *Setup and Quick Use Guide* (supplied with your TV) for details on the following:

- Basic TV Connections
- Television and Remote Operation
- On-screen Menu Controls
- How to Use the Installation Features
- Connection Options for Accessory Devices



NOTE: This owner's manual is used with several different television models. Not all features (and illustrations) discussed herein will necessarily match your television set. This is normal and does not require that you contact your dealer or request service.

Because of continuous product improvements, the information mentioned in the documents accompanying your product are subject to change without notice.

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FEATURES

Audio/Video Jack Panel allows direct connections with VCRs, DVDs, or other accessory devices, providing quality TV picture and sound playback.

Audio Volume Leveler (AVL) Control keeps the TV sound at an even level. Peaks and valleys that occur during program changes or commercial breaks are reduced, making for a more consistent, comfortable sound.

AutoChron automatically sets the right time of day and maintains it with digital precision through brownouts, power failures, and even Daylight Savings Time adjustments.

AutoLock allows you to block the viewing of certain channels or programs with certain ratings if you do not want your children to view inappropriate materials.

Auto Program scans for all available channels from regular antenna or cable signals and stores only active broadcast stations in the TV's memory.

AutoPicture allows you to push a button and adapt your television's picture to various types of programming, such as sports, movies, and multimedia (games), as well as to the occurrence of a weak broadcast signal.

AutoSound allows you to select from three factory-set controls and a personal control that you set according to your own preferences through the on-screen Sound menu. The three factory-set controls (Voice, Music, and Theatre) enable you to tailor the TV sound to enhance the particular programming you are watching.

Bass Boost increases the low-frequency range of the TV's sound.

Channel Edit allows you to add or delete channels from the list stored in the TV's memory. Channel Edit makes it easy to limit or expand the number of channels that are available to you when you press the Channel Scan (+,–) buttons on your remote control.

Closed Captioning allows the viewer to read TV program dialogue or voice conversations as on-screen text.

Dynamic Noise Reduction (DNR) can help eliminate broadcast signal noise ("speckles" in the picture).

ImageMax helps you sharpen the picture quality by making dark portions of the picture darker and lighter portions brighter.

Incredible Surround boosts the TV's sound, making it broader and fuller.

Infrared Remote Control works your TV and other remote-controlled devices, such as VCRs, DVD players, cable converters, and satellite receivers.

On-screen Menu shows helpful messages and instructions for adjusting or setting TV feature controls (can be viewed in English, French, or Spanish).

Sleep Timer automatically turns the TV off after a set amount of time of your choice.

Standard Broadcast (VHF/UHF) or Cable TV (CATV) channel capability allows for viewing by antenna or cable.

Stereo capability, including a built-in audio amplifier and twin-speaker system, allows for the reception of TV programs broadcast in stereo sound.

Surf Button allows you to easily switch among only the channels that are of interest to you (the ones that you have programmed into the TV's Surf control through the on-screen menu).

Timer allows you to set your TV to turn itself on and off once or daily like an alarm clock.

Two Tuners (ANT[enna] "A" and PIP ANT[enna] "B") enable you to connect two different broadcast signals to your TV at once. On screen these signal sources are referred to as "Tuner-A" and "Tuner-B."

Digital-Ready Projection TV

This Projection Television is capable of connecting to both the current analog television signals of today as well as interfacing with new, upcoming digital source playback products and devices. This TV includes multiple signal connectors (Component Video, S-Video, and Composite Video), which give you a variety of equipment playback options for digital set-top boxes, satellite receivers, cable boxes, and other digital devices.

While there may exist some digital devices with connections not available on this television, you should be adequately prepared for the vast majority of products coming onto the digital consumer electronics' market. **NOTE:** You should always use the connection output on digital devices that gives the highest level of picture quality possible. As listed above, the Component Video (or Y P_B P_R) input delivers the best color and picture reproduction, followed by S-Video, and then Composite Video. In addition to these inputs, your television also includes the standard 75-ohm cable signal connector for use with antennas or analog cable boxes.

Items Included with This TV

As you unpack your TV, please note that this *Directions for Use* manual contains the following:

- Safety Tip Information
- Factory Service Center Locations.

Also included with your set are the following:

- Warranty Registration Card
- Remote Control Transmitter
- Batteries for Remote Control Use.

Please take a few minutes to complete your registration card. The serial number for the TV is on the back of the set.

Refer to the back of this manual for instructions in the cleaning and care of the TV.

End-of-Life Disposal

Your new projection television and its packaging contain materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and minimize the amounts that need to be properly disposed. The batteries used by your product should not be thrown away when depleted but should be handed in and disposed of as small chemical waste. Please find out about the local regulations concerning how to dispose of your old television, batteries, and packaging materials whenever it is time to replace them.

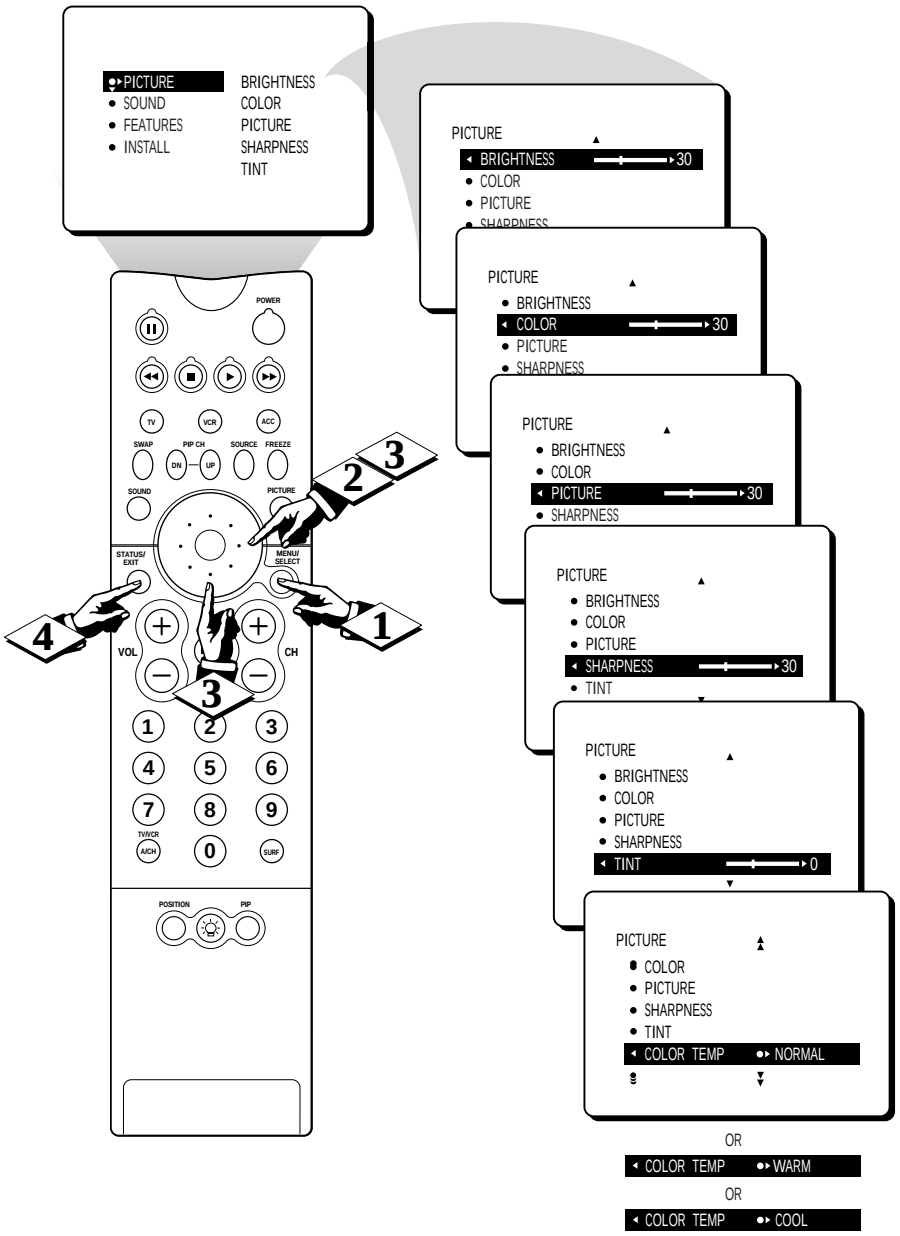
ADJUSTING THE PICTURE

To adjust your TV picture controls, select a channel and follow these steps.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING RIGHT.** BRIGHTNESS will be highlighted and an adjustment bar will be shown to the right.
3. **Press the CURSOR RING RIGHT or LEFT** to adjust the BRIGHTNESS level of the picture. **Or press the CURSOR RING DOWN** to select another picture control to adjust.
4. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

When the bar scale is centered, the control settings are at normal, mid-range levels. Picture adjustment controls are described here.

BRIGHTNESS—adds or subtracts light from the darkest part of the picture.

COLOR—adds or eliminates color.

PICTURE—improves the detail of the lightest parts of the picture.

SHARPNESS—improves the detail in the picture.

TINT—adjusts the picture to obtain natural skin tones.

COLOR TEMP—offers NORMAL, COOL, or WARM picture preferences.

NORMAL—keeps whites, white.

COOL—makes whites, bluish.

WARM—makes whites, reddish.

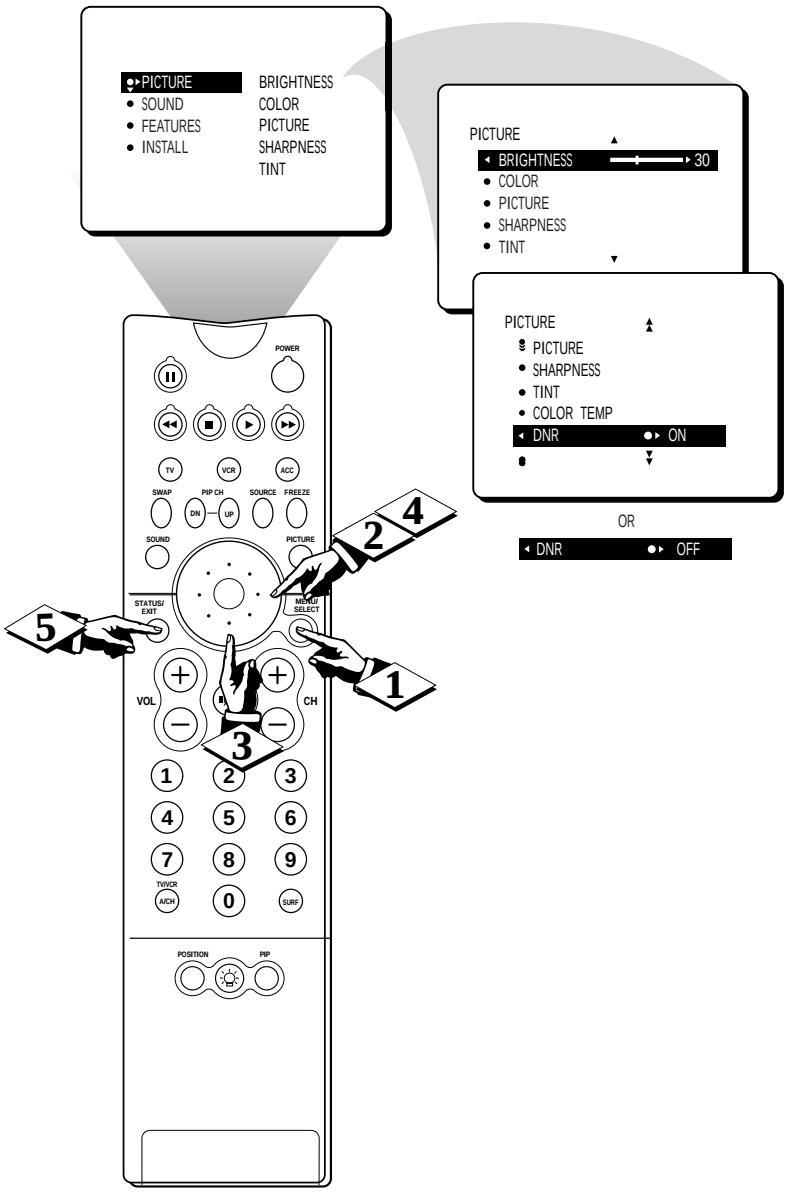
TURNING ON THE DYNAMIC NOISE REDUCTION (DNR) CONTROL

Because of poor cable reception or other difficulties, the picture can sometimes appear slightly "speckled" (an indication of signal noise in the picture). The DNR (Dynamic Noise Reduction) control can help eliminate this type of interference and improve the quality of the picture.

BEGIN

1. **Press the MENU/SELECT button** on the remote to show the on-screen menu.
2. **Press the CURSOR RING RIGHT** to enter the PICTURE menu.
3. **Press the CURSOR RING DOWN** repeatedly until the DNR control is highlighted.
4. **Press the CURSOR RING RIGHT or LEFT** to switch DNR ON or OFF.
5. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



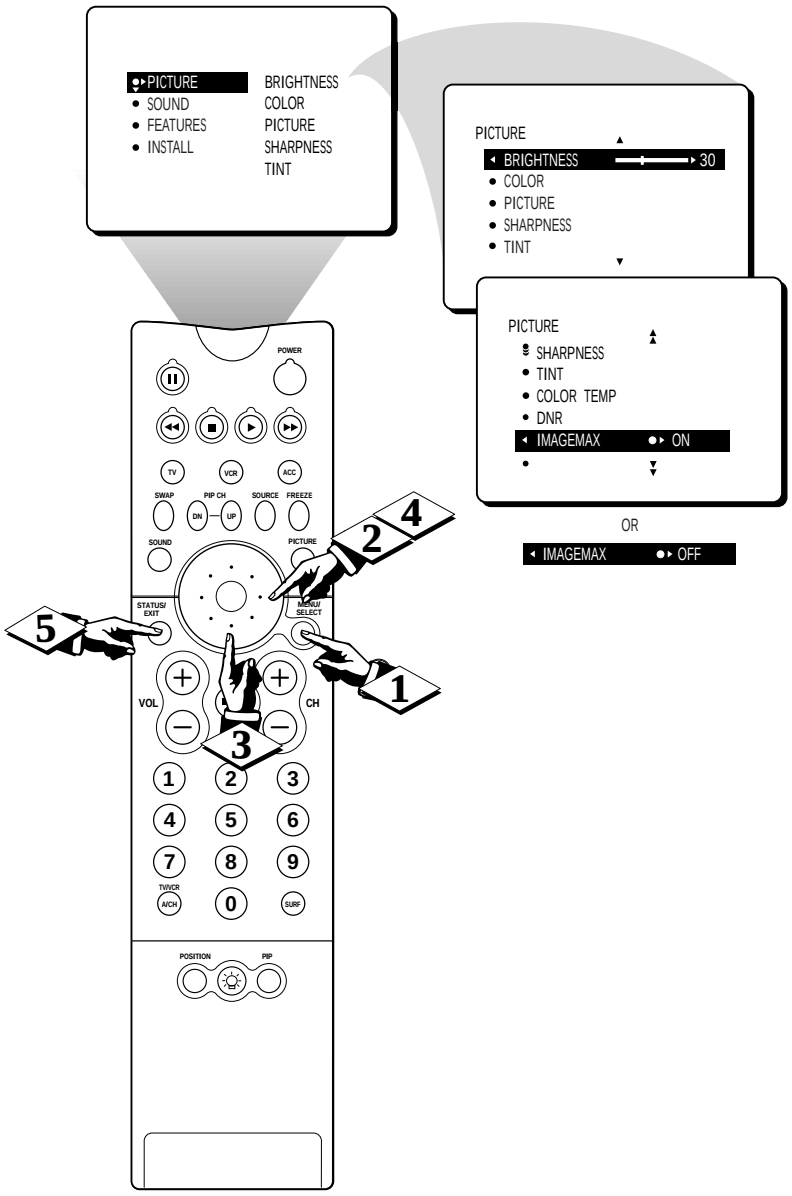
TURNING ON THE IMAGEMAX CONTROL

ImageMax helps you sharpen the picture quality by making dark portions of the picture darker and light portions of the picture brighter. Follow these steps to turn ImageMax on.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING RIGHT** to enter the PICTURE menu**.**
3. **Press the CURSOR RING DOWN** repeatedly until the IMAGEMAX control is highlighted.
4. **Press the CURSOR RING RIGHT or LEFT**to switch between ON and OFF.
5. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



CONVERGE RED/BLUE

The influence of magnetic fields and changes in the position of the TV may cause screen colors not to line up properly. The result on your TV screen will be red or blue colors appearing around the edges of images.

If various images on the entire picture have red outlines, adjust the CONVERGE RED control. Then if any red outlines remain, adjust the MULTIPOINT RED control.

If various images on the entire picture have blue outlines, adjust the CONVERGE BLUE control. Then if any blue outlines remain, adjust the MULTIPOINT BLUE control.

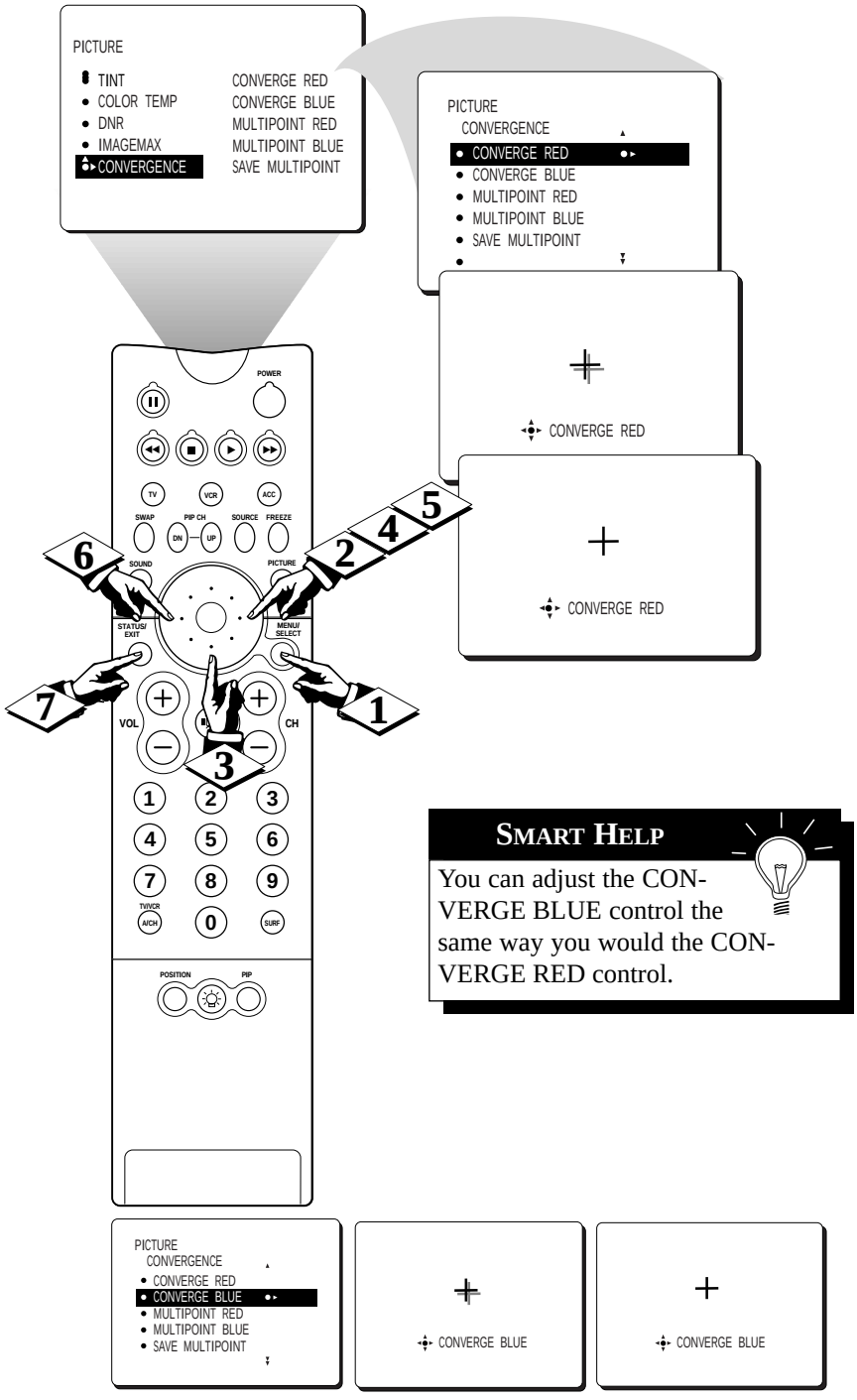
Use the UNDO MULTIPOINT control if you want to restore the picture screen to the way it was before you made Multipoint adjustments.

NOTE: After turning the TV set on, allow it to warm up for 15 minutes before adjusting the Convergence controls.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING RIGHT** to enter the PICTURE menu.
3. **Press the CURSOR RING DOWN** repeatedly until CONVERGENCE is selected.
4. **Press the CURSOR RING RIGHT** to enter the CONVERGENCE menu.
5. **Press the CURSOR RING RIGHT** to enter CONVERGE RED mode.
6. **Press the CURSOR RING LEFT, RIGHT, UP, or DOWN** to adjust the cross image until the color outline around it is gone.
7. **Press the STATUS/EXIT button** to exit the menu from the screen.

STOP



SMART HELP

You can adjust the CONVERGE BLUE control the same way you would the CONVERGE RED control.

CONVERGE MULTIPOINT RED/BLUE

If various images on the entire picture have red outlines, adjust the CONVERGE RED control. Then if any red outlines remain, adjust the MULTIPOINT RED control.

Likewise, if various images on the entire picture have blue outlines, adjust the CONVERGE BLUE control. Then if any blue outlines remain, adjust the MULTIPOINT BLUE control.

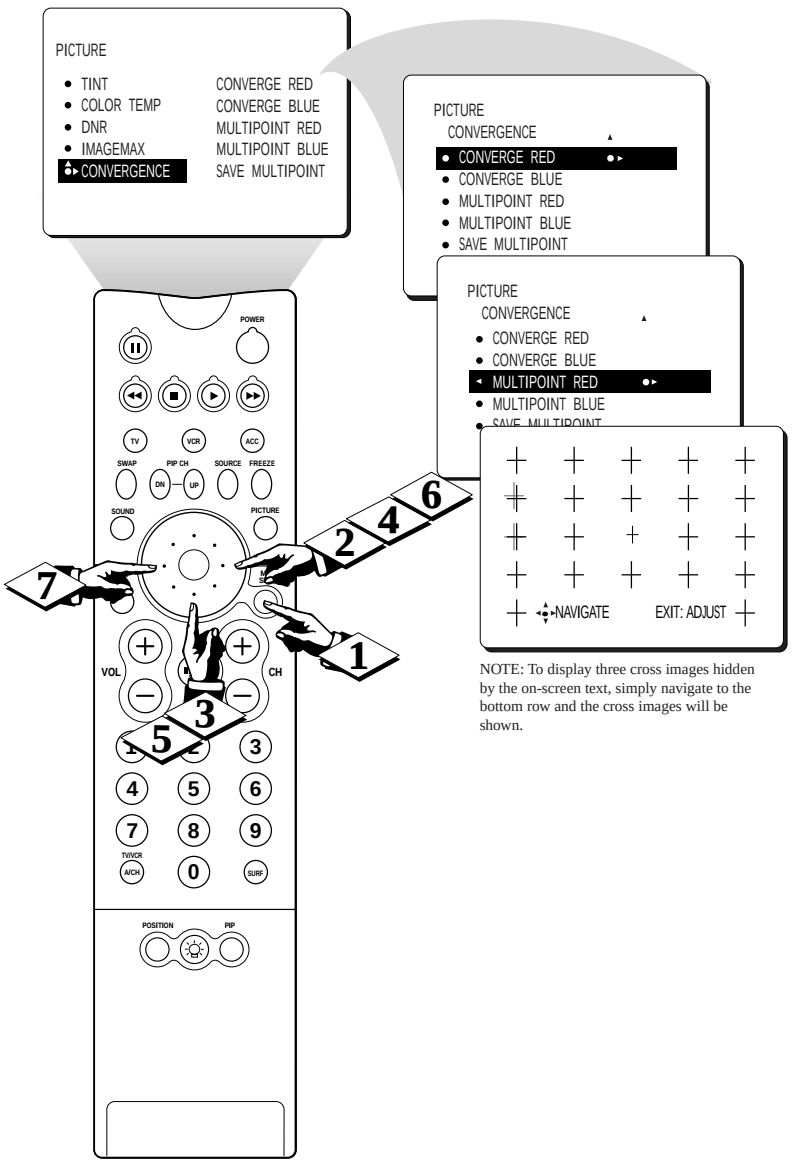
Use the UNDO MULTIPOINT control if you want to restore the picture screen to the way it was before you made Multipoint adjustments.

NOTE: After turning the TV set on, allow it to warm up for 15 minutes before adjusting the Convergence controls.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING RIGHT** to enter the PICTURE menu.
3. **Press the CURSOR RING DOWN** repeatedly until CONVERGENCE is selected.
4. **Press the CURSOR RING RIGHT** to enter the CONVERGENCE menu.
5. **Press the CURSOR RING DOWN** repeatedly until MULTIPOINT RED is selected.
6. **Press the CURSOR RING RIGHT** to enter NAVIGATE mode.
7. **Press the CURSOR RING LEFT, RIGHT, UP, or DOWN** to move to a cross image that has a color outline.

Go to step 8 on the next page.



NOTE: To display three cross images hidden by the on-screen text, simply navigate to the bottom row and the cross images will be shown.

CONVERGE MULTIPOINT RED/BLUE

8 **Press the STATUS/EXIT button** to enter the ADJUST mode.

9 **Press the CURSOR RING LEFT, RIGHT, UP, or DOWN** to adjust the cross image until the color outline is gone.

10 **Press the STATUS/EXIT button** to return to NAVIGATE mode.

Repeat steps 7–10 until all misaligned crosses have been adjusted.

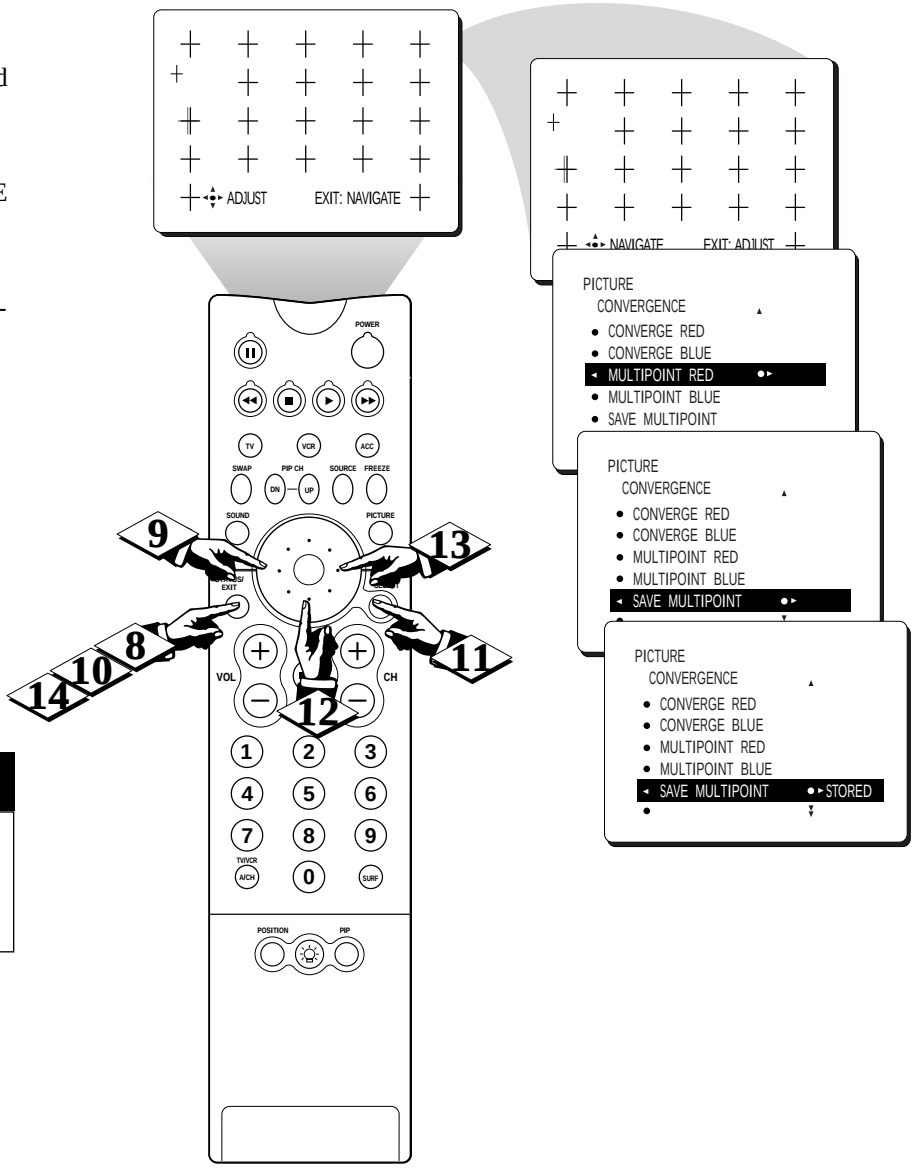
11 **Press the MENU/SELECT button** to return to the CONVERGENCE menu.

12 **Press the CURSOR RING DOWN** repeatedly until SAVE MULTIPOINT is selected.

13 **Press the CURSOR RING RIGHT** to activate the storing of the Multipoint adjustments you have made.

14 **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

You can adjust the MULTIPOINT BLUE control in the way you would adjust the MULTIPOINT RED control.

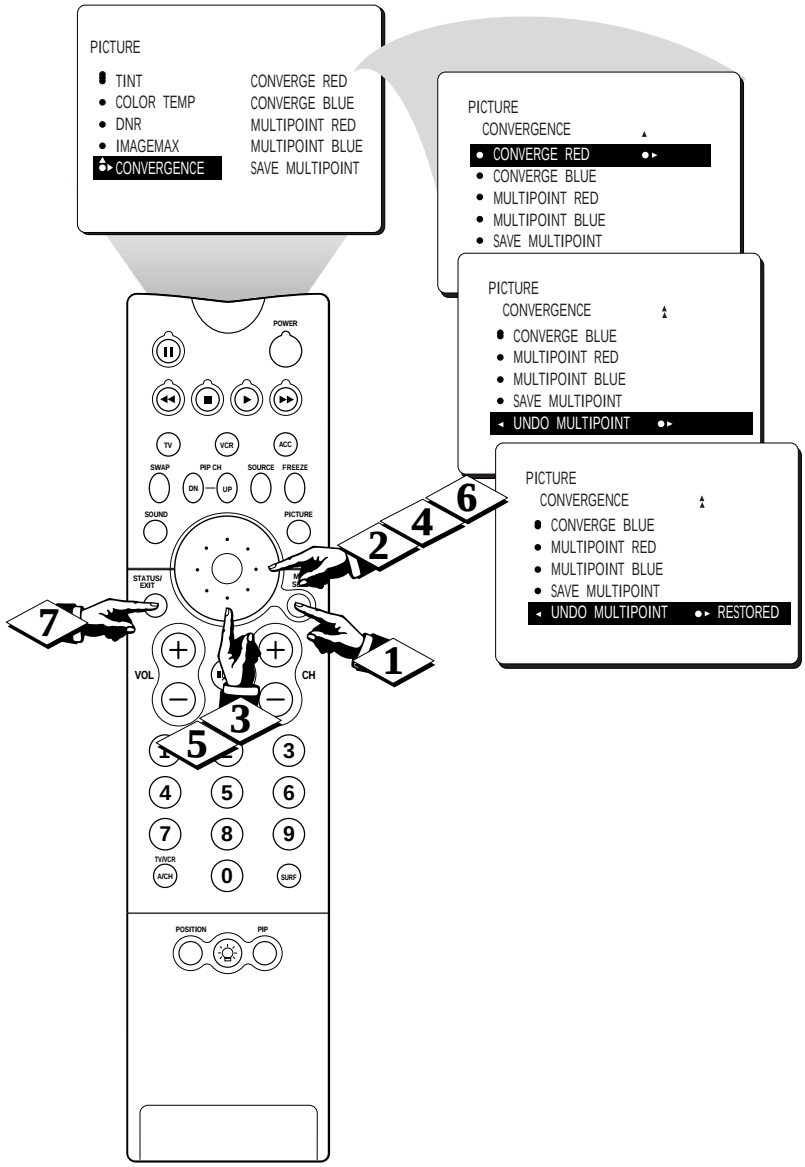
UNDO MULTIPOINT

The UNDO MULTIPOINT control allows you to restore the TV's picture screen to the way it was before you made Multipoint adjustments.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING RIGHT** to enter the PICTURE menu.
3. **Press the CURSOR RING DOWN** repeatedly until CONVERGENCE is selected.
4. **Press the CURSOR RING RIGHT** to enter the CONVERGENCE menu.
5. **Press the CURSOR RING DOWN** repeatedly until UNDO MULTIPOINT is selected.
6. **Press the CURSOR RING RIGHT** to activate the restoring of the previous picture screen.
7. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



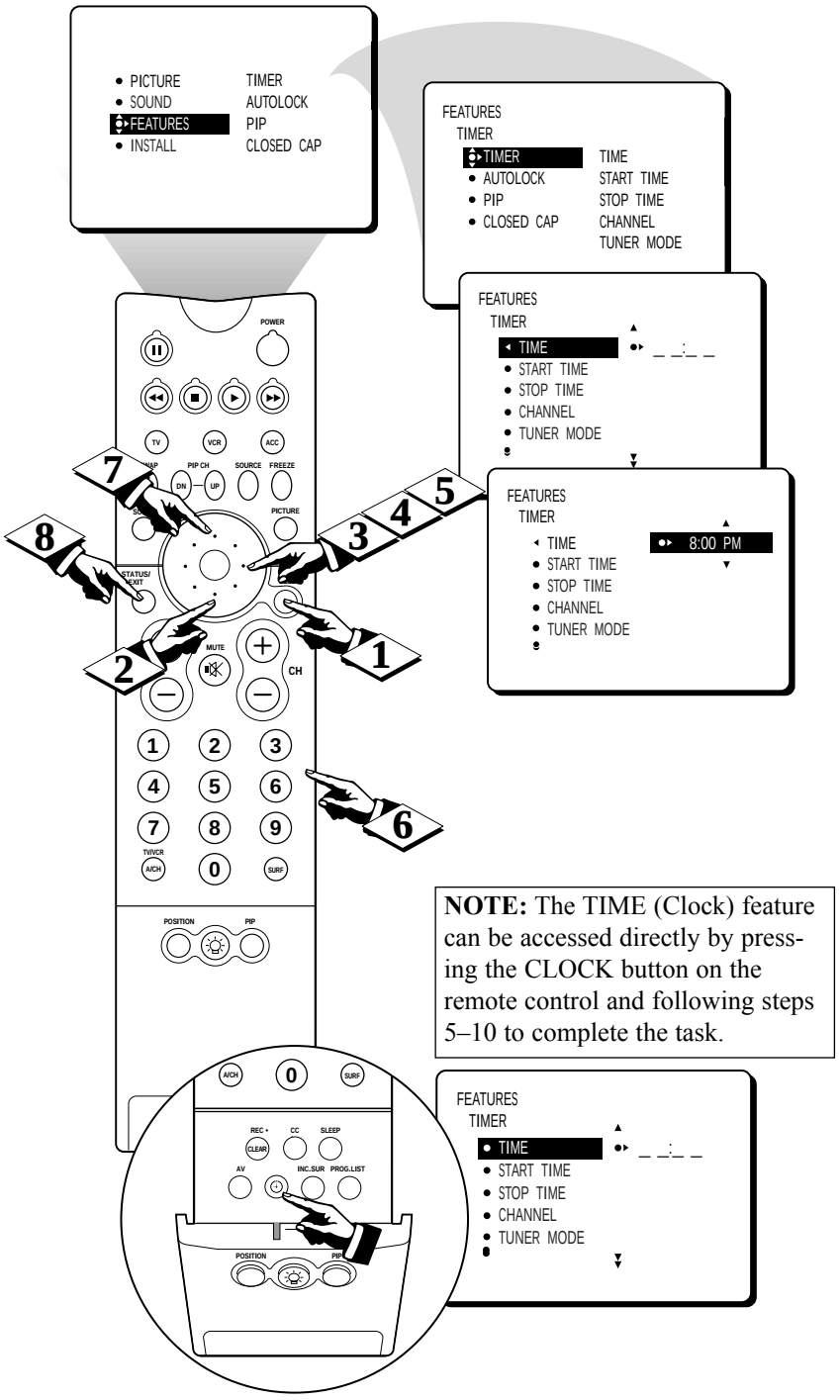
SETTING THE CLOCK

Your television comes with an on-screen clock. During normal operation, the clock appears on the screen when the STATUS/EXIT button is pressed or if the TIMER DISPLAY control is turned ON.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING RIGHT** again to shift the display left and highlight the TIME control.
5. **Press the CURSOR RING RIGHT** again to highlight the time indicator area.
6. **Press the NUMBER buttons** to enter the correct time. If you make a mistake entering the time, use the CURSOR RING LEFT or RIGHT to move among the input slots to make corrections. **NOTE:** You may also use the CURSOR RING UP or DOWN to cycle through digits to input the time.
7. **Press the CURSOR RING UP or DOWN** to select AM or PM.
8. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



NOTE: The TIME (Clock) feature can be accessed directly by pressing the CLOCK button on the remote control and following steps 5–10 to complete the task.

SMART HELP

- For single-digit entries, be sure to press *0* first and then the hour number.
- If you'd like, set the clock automatically using the AutoChron feature (page 6, *Setup and Quick Use Guide*).
- Clock settings may be lost when the TV is unplugged or when AC power to the set is interrupted.

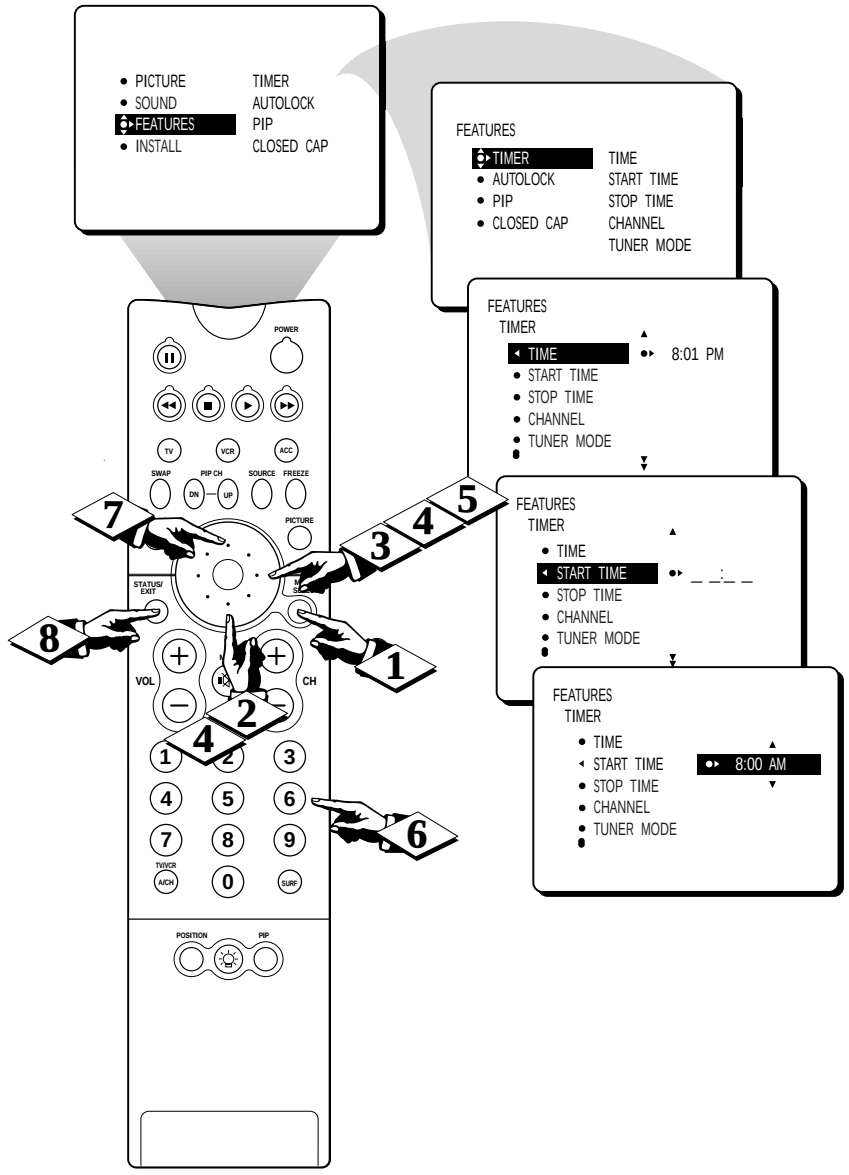
SETTING THE START TIME

You can set the TV to turn itself on at a specific time, just as you would an alarm clock. Follow these steps to set the Start Time.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING RIGHT** again. Then **press the CURSOR RING DOWN** once to highlight the START TIME control.
5. **Press the CURSOR RING RIGHT** again to highlight the time indicator area.
6. **Press the NUMBER buttons** to enter the correct time. If you make a mistake entering the time, use the CURSOR RING LEFT or RIGHT to move among the time input slots to make corrections. **NOTE:** You can also use the CURSOR RING UP or DOWN to cycle through digits to input the time.
7. **Press the CURSOR RING UP or DOWN** to select AM or PM.
8. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

You can set STOP TIME similarly to the way you set START TIME. Instructions are on the next page.

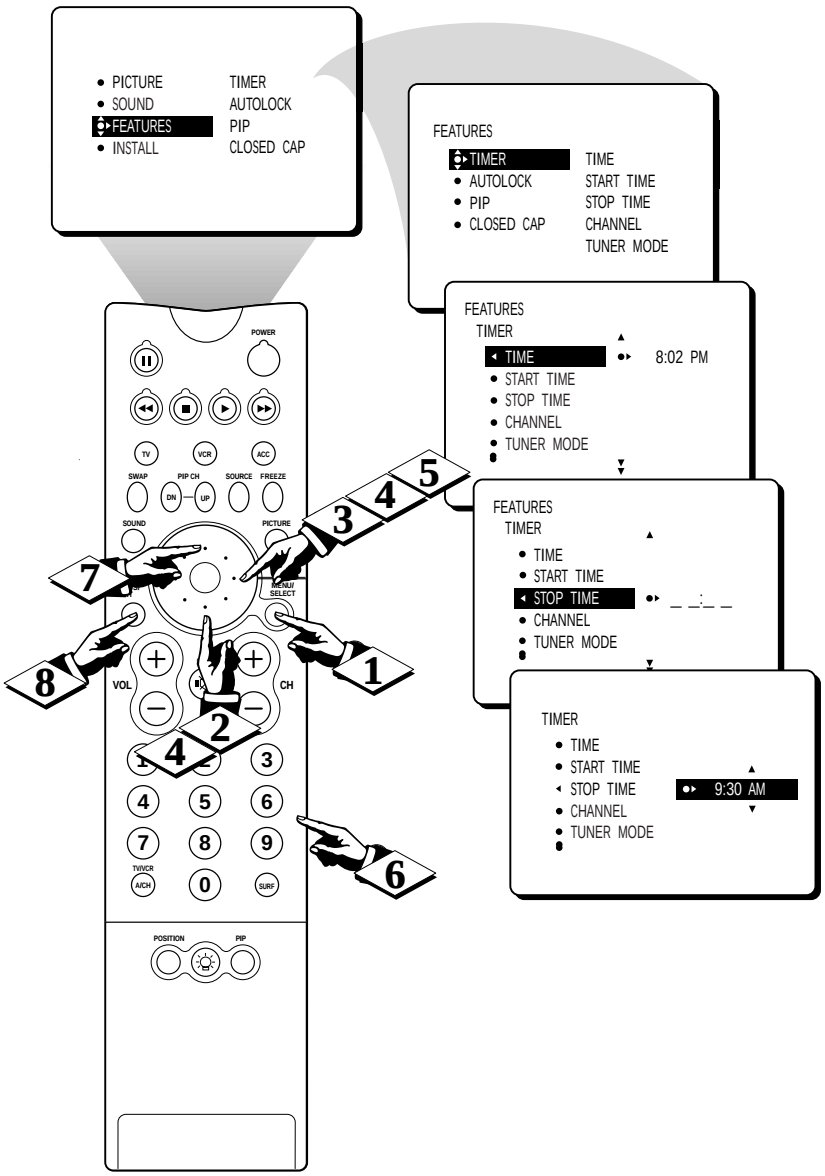
SETTING THE STOP TIME

Use the START TIME control to set the TV to turn itself on at a specific time (see the previous page). The following steps will guide you in setting the TV to turn itself off.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING RIGHT again**. Then **press the CURSOR RING DOWN** twice to highlight the STOP TIME control.
5. **Press the CURSOR RING RIGHT** to highlight the time indicator area.
6. **Press the NUMBER buttons** to enter the correct time. If you make a mistake entering the time, use the CURSOR RING LEFT or RIGHT to move among the input slots to make corrections. **NOTE:** You can also use the CURSOR RING UP or DOWN to cycle through digits to input the time.
7. **Press the CURSOR RING UP or DOWN** to select AM or PM.
8. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



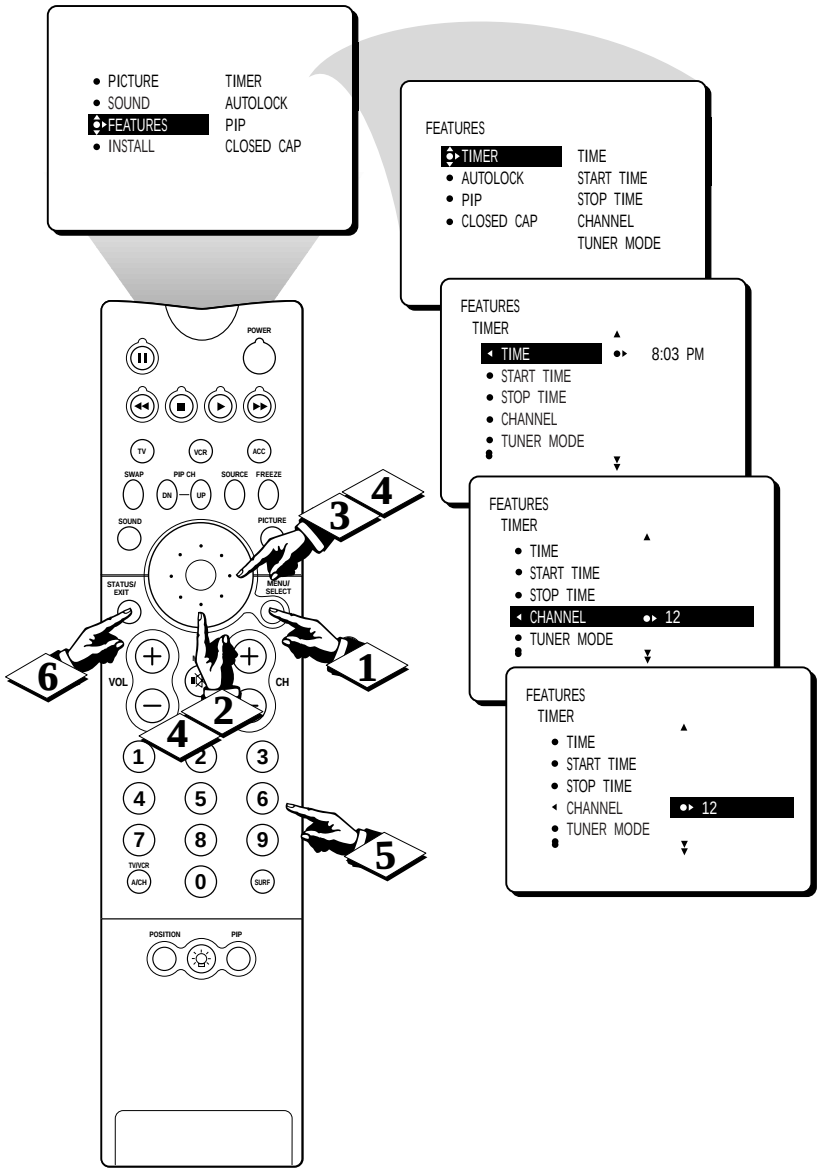
SELECTING THE CHANNEL

You can select a specific channel that the television will tune to when the timer turns the set on. Follow these steps to select the channel.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** repeatedly until the CHANNEL control is highlighted.
5. **Press the NUMBER buttons** to enter the desired start-up channel. **Or press the CURSOR RING RIGHT** repeatedly to enter the start-up channel you want.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



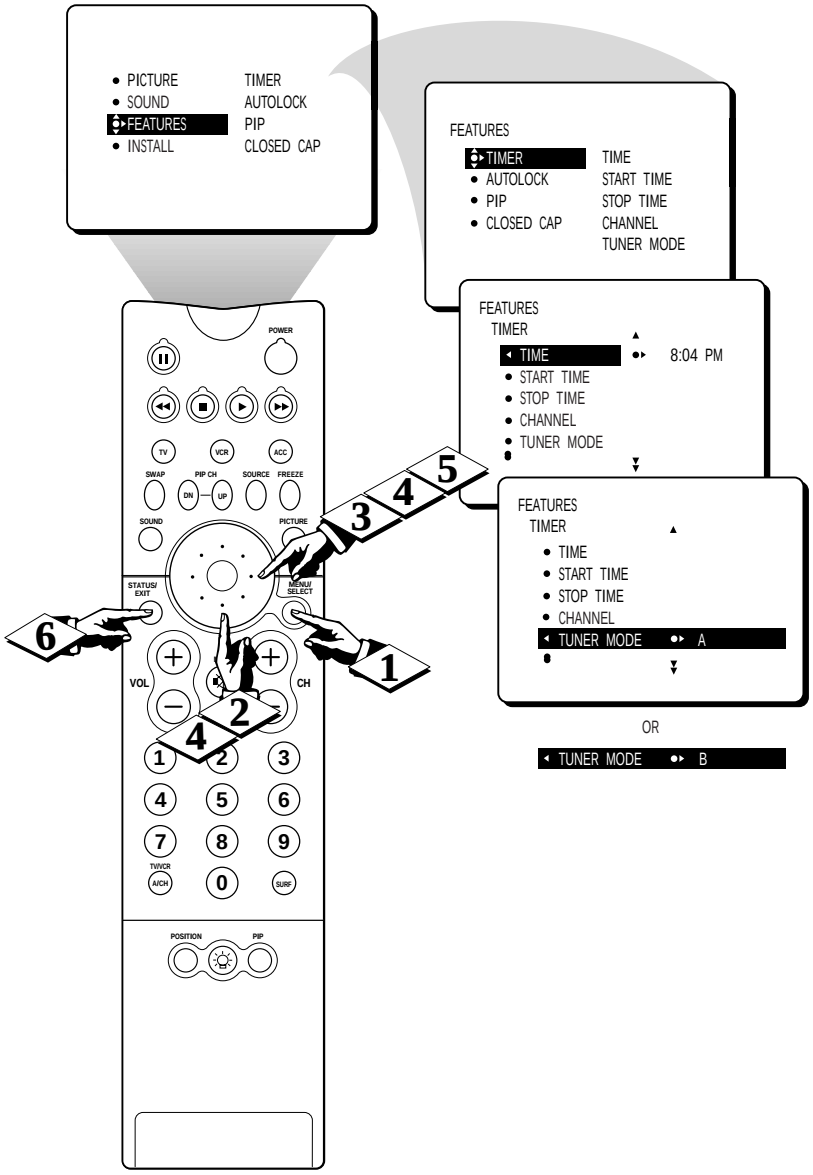
SELECTING THE TUNER

Using the START TIME feature, you can select either TUNER A (ANT[enna] "A") or TUNER B (PIP ANT[enna] "B") to be the main signal source when the TV is powered on.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** repeatedly until the TUNER MODE control is highlighted.
5. **Press the CURSOR RING RIGHT or LEFT** to select A or B.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



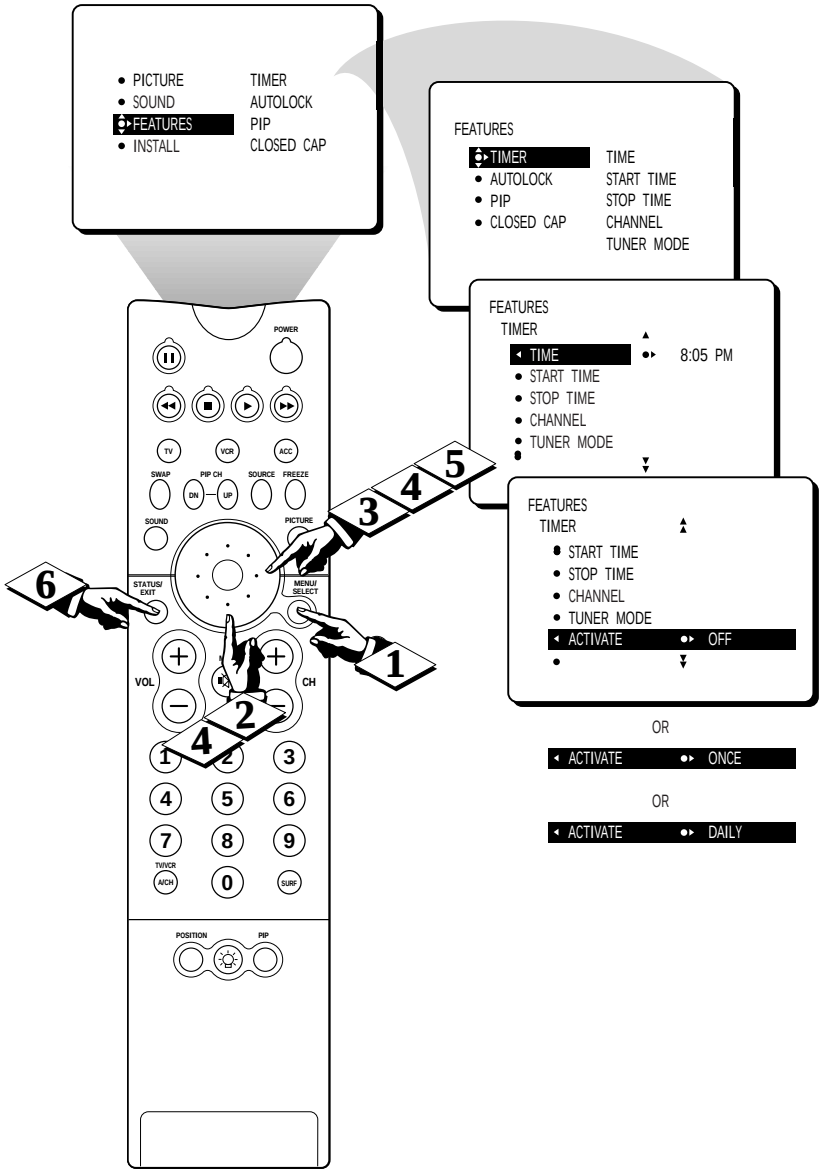
SETTING THE ACTIVATE CONTROL

After you have set the Time, Start Time, Stop Time, and Start Channel, you must activate the Timer for it to operate. Your options are to set the Timer to work ONCE or DAILY. Set ACTIVATE to OFF if you don't want to use the Timer.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING RIGHT** again. Then **press the CURSOR RING DOWN** repeatedly until the ACTIVATE control is highlighted.
5. **Press the CURSOR RING RIGHT** again to set ACTIVATE to ONCE, **press the CURSOR RING RIGHT** again for DAILY, or **press the CURSOR RING RIGHT** again to toggle ACTIVATE to OFF.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

Before you set the TIMER controls, you must set the TV's clock manually within the Timer menu (see page 13) or by using the AutoChron feature described on page 6 of the *Setup and Quick Use Guide.*

Try it! After following the steps on pages 13–19, use your TV to wake you up like a clock radio.

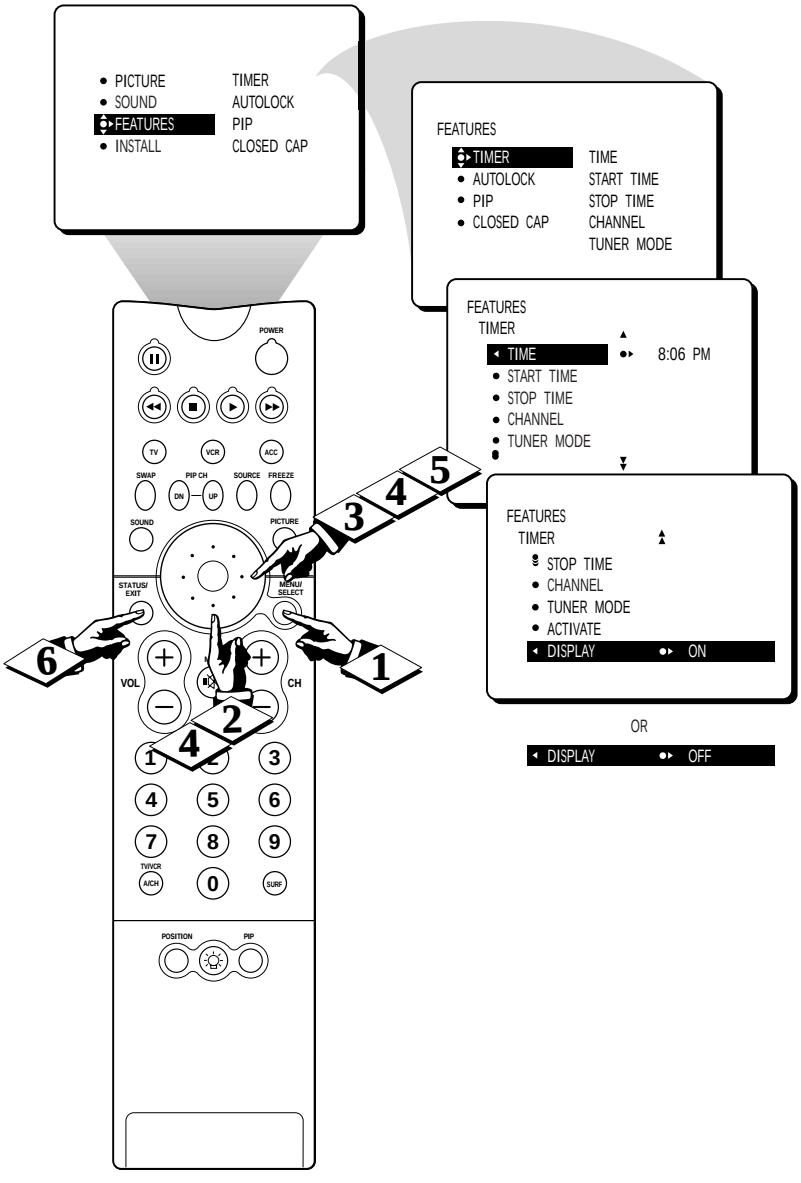
CONSTANTLY DISPLAYING THE TIME ON SCREEN

After you have set the TV's clock, you can use your TV to keep up with the time. The TIMER DISPLAY control allows you to permanently display the time in the upper right corner of the screen.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING RIGHT** again. Then **press the CURSOR RING DOWN** repeatedly until the DISPLAY control is highlighted.
5. **Press the CURSOR RING RIGHT or LEFT** to turn the TIMER DISPLAY ON or OFF.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



UNDERSTANDING AUTOLOCK

The AutoLock feature can help parents censor what their children watch on TV. AutoLock receives content advisories sent by broadcasters or other program providers. After you program AutoLock, it can respond to the content advisories and block programs that contain content which you may consider objectionable—offensive language, violence, or sexual situations.

In this section, you'll learn how to block channels and programming that is not rated, is unrated, or has no rating. You will also find out how to turn these blocking features on or off. Following on this page are brief explanations of AutoLock terms and program ratings.

Terms

BLOCKING control—can be thought of as the "master switch" for AutoLock. This control affects the settings you have chosen for blocking programs according to movie ratings or TV ratings, or for blocking programs that have no rating or are unrated. When the BLOCKING control is OFF, the blocking or censoring of programs is disabled. When the BLOCKING control is ON, blocking will occur according to the settings you have chosen.

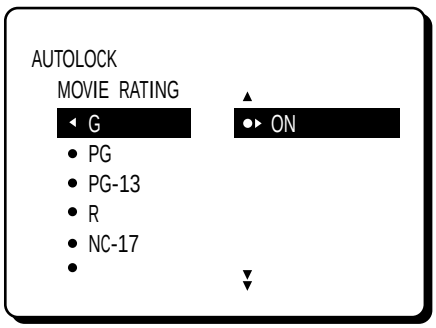
BLOCK UNRATED control—if set to ON, blocks all unrated programs.

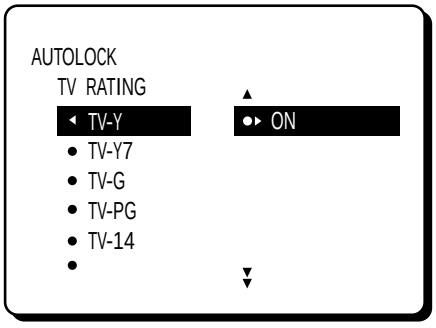
Unrated programming consists of the kind of shows that the MPAA (Motion Picture Association of America) or the TV broadcasters have chosen not to rate.

NO RATING control—if set to ON, blocks all programming with no content advisory data.

Programming that has No Rating is not encoded with any rating information from the MPAA or the Parental Guidelines. Any programming could fall into this category.

You can also block individual channels using the BLOCK CHANNEL control.





MOVIE RATINGS
(MOTION PICTURE ASSOCIATION OF AMERICA)

G (General Audience)—all ages admitted. Most parents will find programs that are rated G to be suitable for children of all ages. Such programs have little or no violence, no strong language, and little or no sexual dialogue or sexual situations.

PG (Parental Guidance Suggested)—contain material that parents may find unsuitable for younger children. Programs that are rated PG have one or more of the following: moderate violence, some sexual situations, infrequent coarse language, or some suggestive dialogue.

PG-13 (Parents Strongly Cautioned)—contain material that parents may find unsuitable for children under the age of 13. Programs that are rated PG-13 have one or more of the following: violence, sexual situations, coarse language, or suggestive dialogue.

R (Restricted)—specifically designed for adults. Anyone under the age of 17 should view programs that are rated R only with an accompanying parent or adult guardian. Such programs have one or more of the following: intense violence; intense sexual situations; strong, coarse language; or intensely suggestive dialogue.

NC-17 (No one under the age of 17 will be admitted)—should be viewed by adults only. Programs that are rated NC-17 have graphic violence; explicit sex; or crude, indecent language.

X (Adults Only)—contain one or more of the following: very graphic violence, very graphic and explicit or indecent sexual acts, or very coarse and intensely suggestive language.

TV PARENTAL GUIDELINES
(TV BROADCASTERS)

TV Y **TV-Y (All Children)**—designed to be appropriate for all children, especially ones ages 2–6. Programs rated TV-Y are not expected to frighten younger children.

TV Y7 **TV-Y7 (Directed to Older Children)**—designed for children ages 7 and older. Programs rated TV-Y7 may be more appropriate for children who have acquired the development skills needed to distinguish between make-believe and reality. Such programs may include mild fantasy and comic violence (FV).

TV G **TV-G (General Audience)**—most parents will consider programs that are rated TV-G to be suitable for children of all ages. Such programs have little or no violence, no strong language, and little or no sexual dialogue or sexual situations.

TV PG **TV-PG (Parental Guidance Suggested)**—contain material that parents may find unsuitable for younger children. This type of programming has one or more of the following: moderate violence (V), some sexual situations (S), infrequent coarse language (L), or some suggestive dialogue (D).

TV 14 **TV-14 (Parents Strongly Cautioned**—contain material that many parents will find unsuitable for children under 14 years of age. Such programs have one or more of the following: intense violence (V); intense sexual situations (S); strong, coarse language (L); or intensely suggestive dialogue (D).

TV MA **TV-MA (Mature Audience Only)**—specifically designed to be viewed by adults and therefore may be unsuitable for children under 17. Such programs have one or more of the following: graphic violence (V); explicit sexual situations (S); or crude, indecent language (L).

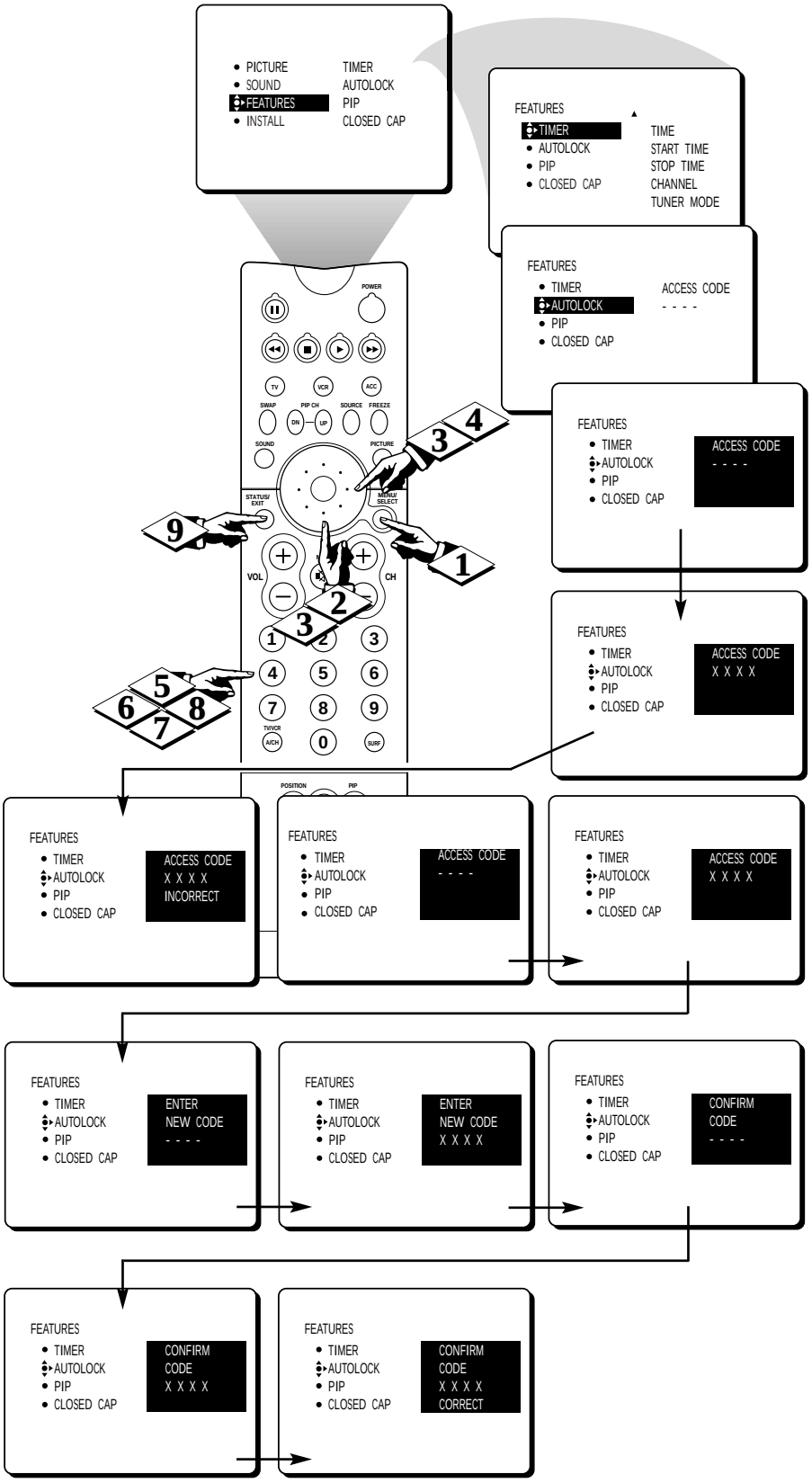
SETTING UP THE ACCESS CODE

AutoLock allows parents to block channels they think children should not watch. A channel blocked by the AUTOLOCK control cannot be viewed until a correct access code is used to unlock the channel for viewing. Follow these steps to set up your Access Code.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT** to highlight **ACCESS CODE.**
5. **Press 0,7,1,1** on the remote control. INCORRECT will appear on the screen.
6. **Press 0,7,1,1** on the remote control again. ENTER NEW CODE will appear on the screen.
7. **Enter a new four-digit code** using the number buttons. CONFIRM CODE will appear on the screen.
8. **Enter your new four-digit code** again. CORRECT will flash on the screen briefly.
9. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

Parents, it isn't possible for your child to unblock a channel without knowing your access code or changing it to a new one. If you discover that your access code has been changed, you can assume that blocked channels may have been viewed.

BLOCKING CHANNELS

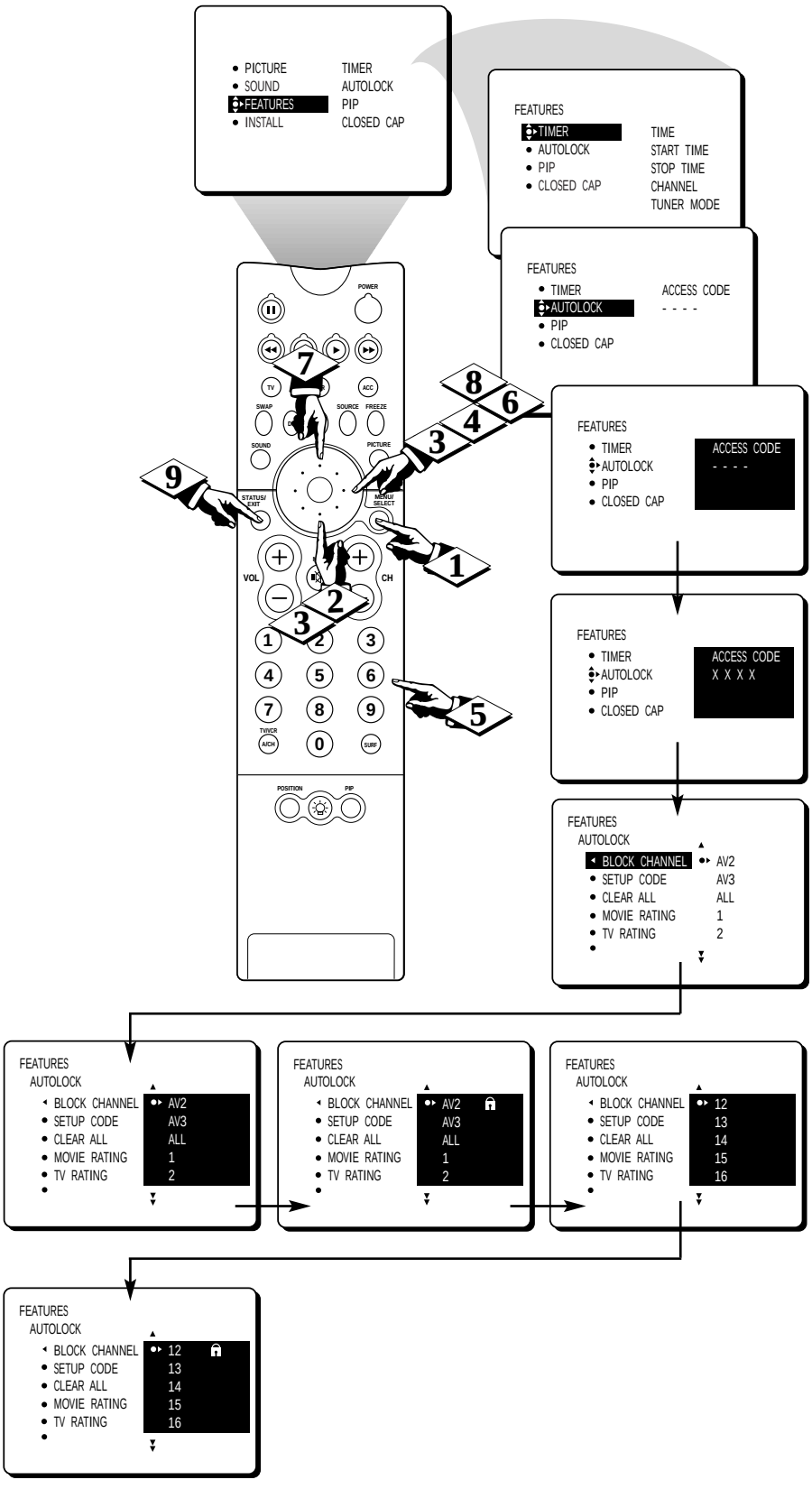
After you have set your personal access code (see the previous page), you are ready to select the channels or program sources you want to block.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT.** Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT** again to highlight ACCESS CODE.
5. **Enter your four-digit ACCESS CODE.** CORRECT will flash very briefly and the menu will move to the left with BLOCK CHANNEL highlighted.
6. **Press the CURSOR RING RIGHT** to highlight the TV's available channels.
7. **Press the CURSOR RING UP or DOWN** to highlight the channel you want to block.
8. **Press the CURSOR RING RIGHT** to block the channel. A padlock image will appear to the right of the channel number.

   Repeat steps 7 and 8 for any channels you want to block from viewing.
9. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

Use BLOCK CHANNEL to prevent the viewing of programs coming from a VCR, DVD, or other accessory device connected to any of the inputs on the TV.

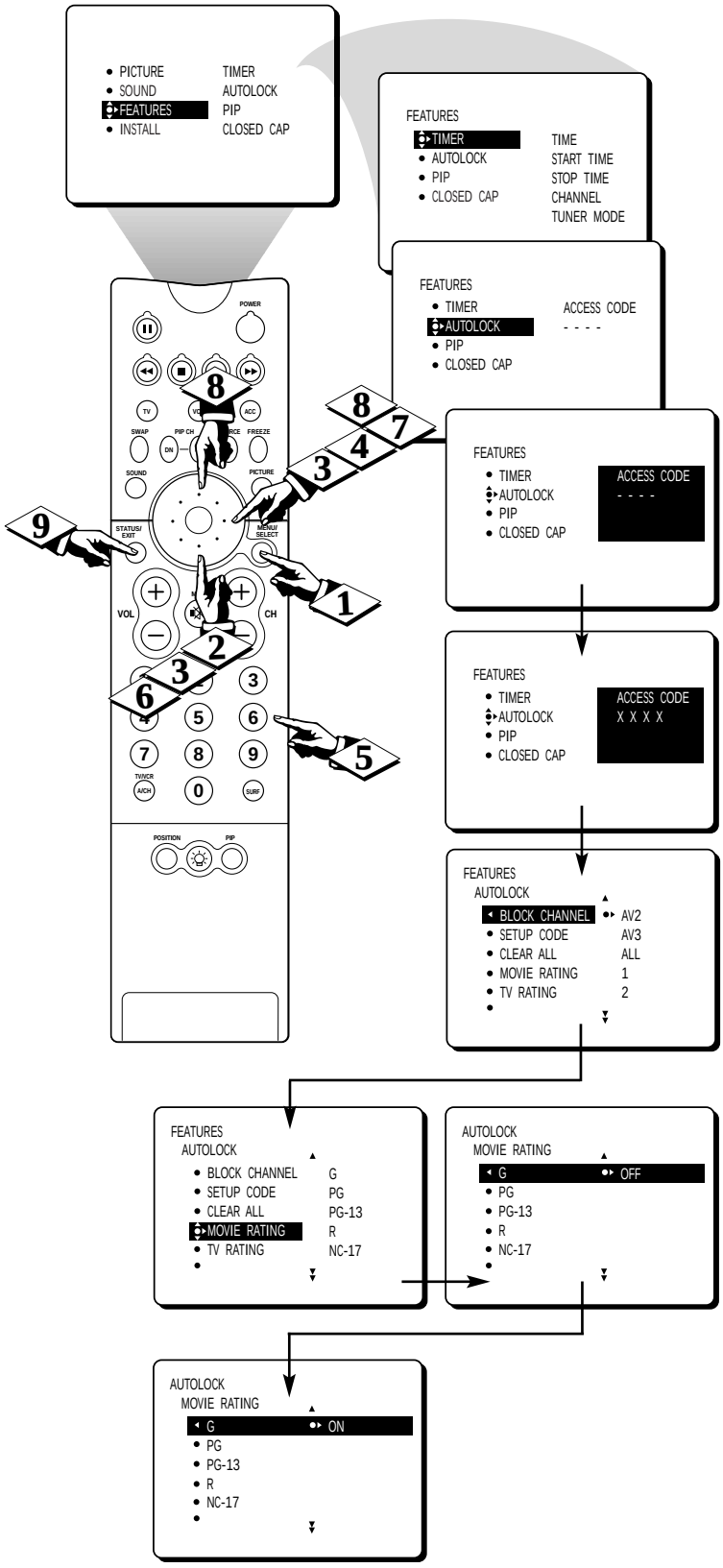
BLOCKING BY MOVIE RATING

After you have set your personal access code (see page 21), you can block programs by specific movie ratings.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT again** to highlight ACCESS CODE**.**
5. **Enter your four-digit ACCESS CODE.** CORRECT will flash very briefly in red and the menu will move to the left with BLOCK CHANNEL highlighted.
6. **Press the CURSOR RING DOWN** repeatedly until MOVIE RATING is highlighted.
7. **Press the CURSOR RING RIGHT** and the Rating menu will shift to the left with G highlighted.
8. **Press the CURSOR RING UP or DOWN** to highlight each rating you want. Then **press the CURSOR RING RIGHT** to turn the rating ON or OFF. Turning the rating ON will block such programs from being seen.
9. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

When a rating is set to be turned on (blocked), all higher ratings will also be blocked automatically. For example, if the R rating is turned on, the NC-17 and X ratings also will be turned on.

BLOCKING BY TV RATING

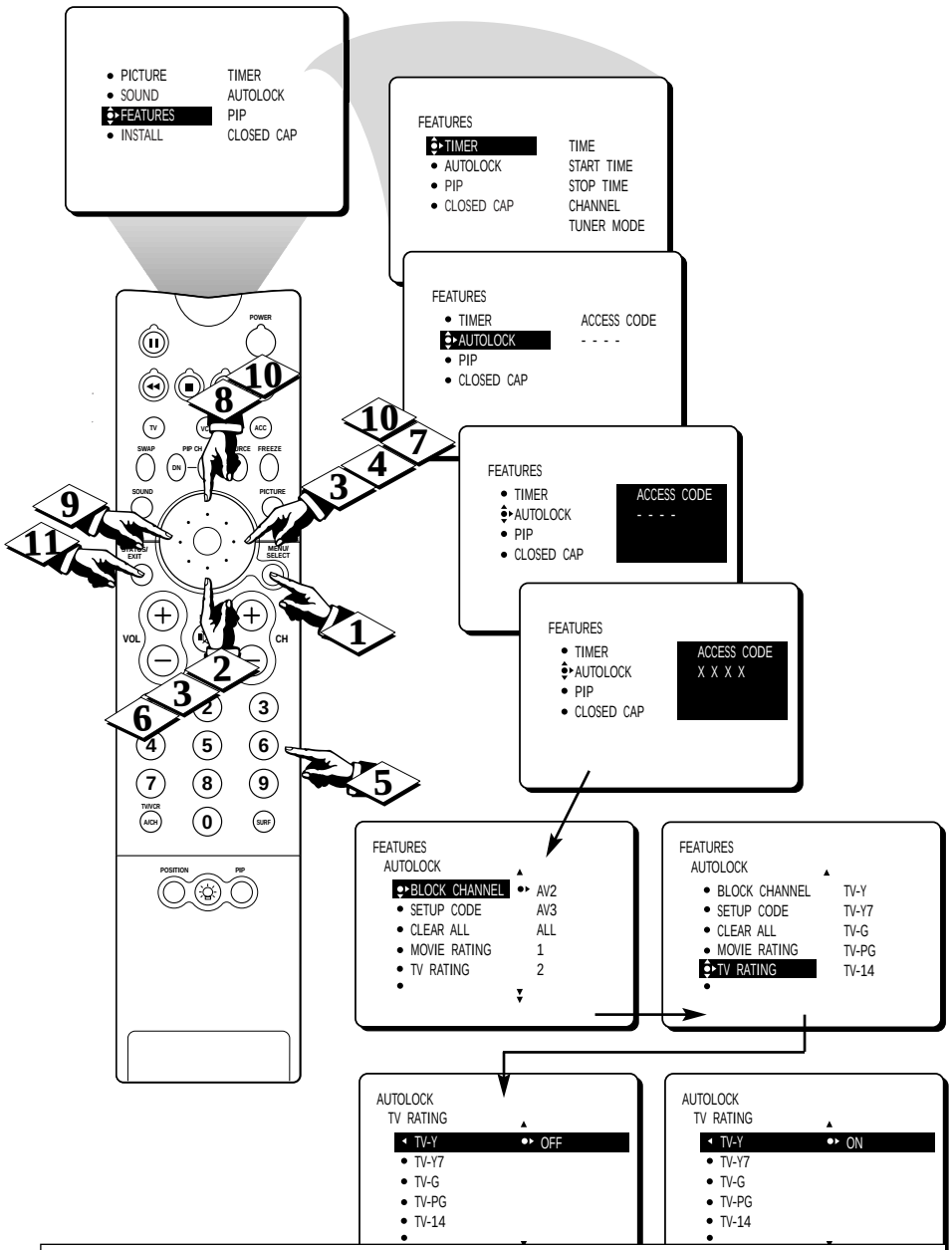
You also can block programs by specific TV ratings. Follow these simple steps.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT** again to highlight ACCESS CODE.
5. **Enter your four-digit ACCESS CODE**.
6. **Press the CURSOR RING DOWN** repeatedly until TV RATING is highlighted.
7. **Press the CURSOR RING RIGHT** to enter the TV RATING menu.
8. **Press the CURSOR RING UP or DOWN** to select a rating.
9. **Press the CURSOR RING RIGHT or LEFT** to turn the block on the rating ON or OFF.

   NOTE: More specific subratings (for violence, sexual content, dialogue, or fantasy violence) are available for TV-Y7, TV-PG, TV-14, and TV-MA.
10. To access these subratings, **press the CURSOR RING RIGHT. Press the CURSOR RING UP or DOWN** to select the subrating that you want to block or unblock. Then **press the CURSOR RING RIGHT or LEFT button** to turn the block on the subrating ON or OFF.
11. **Press the STATUS/EXIT button** to remove the menu.

STOP



TV-Y (**All Children)**—designed to be appropriate for all children, especially ones ages 2–6. Programs rated TV-Y are not expected to frighten younger children.

TV-Y7 (**Directed to Older Children)**—designed for children ages 7 and older. Programs rated TV-Y7 may be more appropriate for children who have acquired the development skills needed to distinguish between make-believe and reality. Such programs may include mild fantasy and comic violence (FV).

TV-G (**General Audience**)—likely to be considered suitable for children of all ages. Such programs have little or no violence, no strong language, and little or no sexual dialogue or sexual situations.

TV-PG (**Parental Guidance Suggested)**—contain material that parents may find unsuitable for younger children. This type of programming has one or more of the following: moderate violence (V), some sexual situations (S), infrequent coarse language (L), or some suggestive dialogue (D).

TV-14 (**Parents Strongly Cautioned)**—contain material that many parents will find unsuitable for children under 14 years of age. Such programs have one or more of the following: intense violence (V); intense sexual situations (S); strong, coarse language (L); or intensely suggestive dialogue (D).

TV-MA (**Mature Audience Only)**—specifically designed to be viewed by adults and therefore may be unsuitable for children under 17. Such programs have one or more of the following: graphic violence (V); explicit sexual situations (S); or crude, indecent language (L).

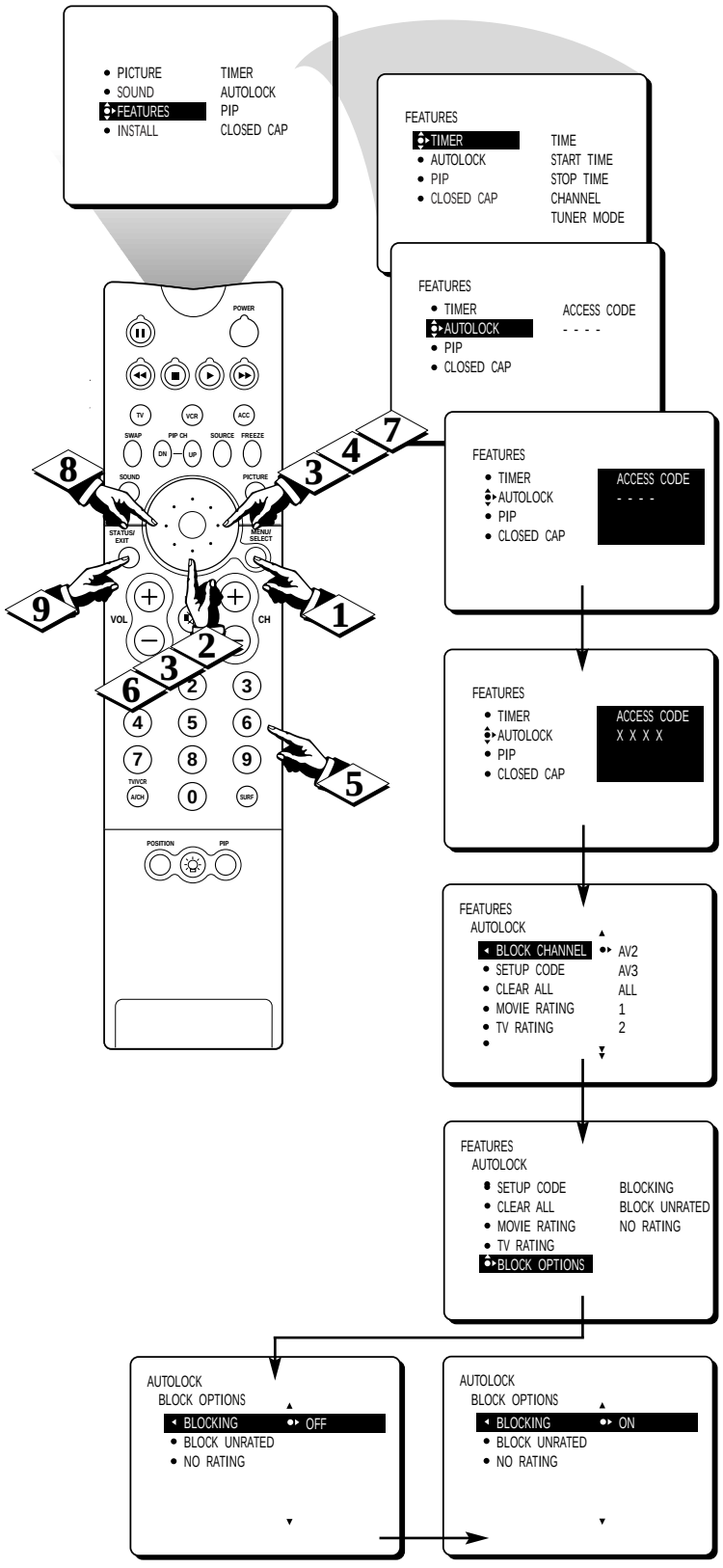
TURNING THE BLOCKING CONTROL ON OR OFF

The BLOCKING control can be thought of as the "master switch" for AutoLock. Use it to turn on or off all of the settings you have chosen to block programming.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT button**. Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT** again to highlight ACCESS CODE.
5. **Enter your four-digit ACCESS CODE**.
6. **Press the CURSOR RING DOWN** repeatedly until BLOCK OPTIONS is highlighted.
7. **Press the CURSOR RING RIGHT** to enter the BLOCK OPTIONS menu. BLOCKING will be highlighted.
8. **Press the CURSOR RING RIGHT or LEFT** to toggle BLOCKING ON or OFF.
9. **Press the STATUS/EXIT button** to remove the menu.

STOP



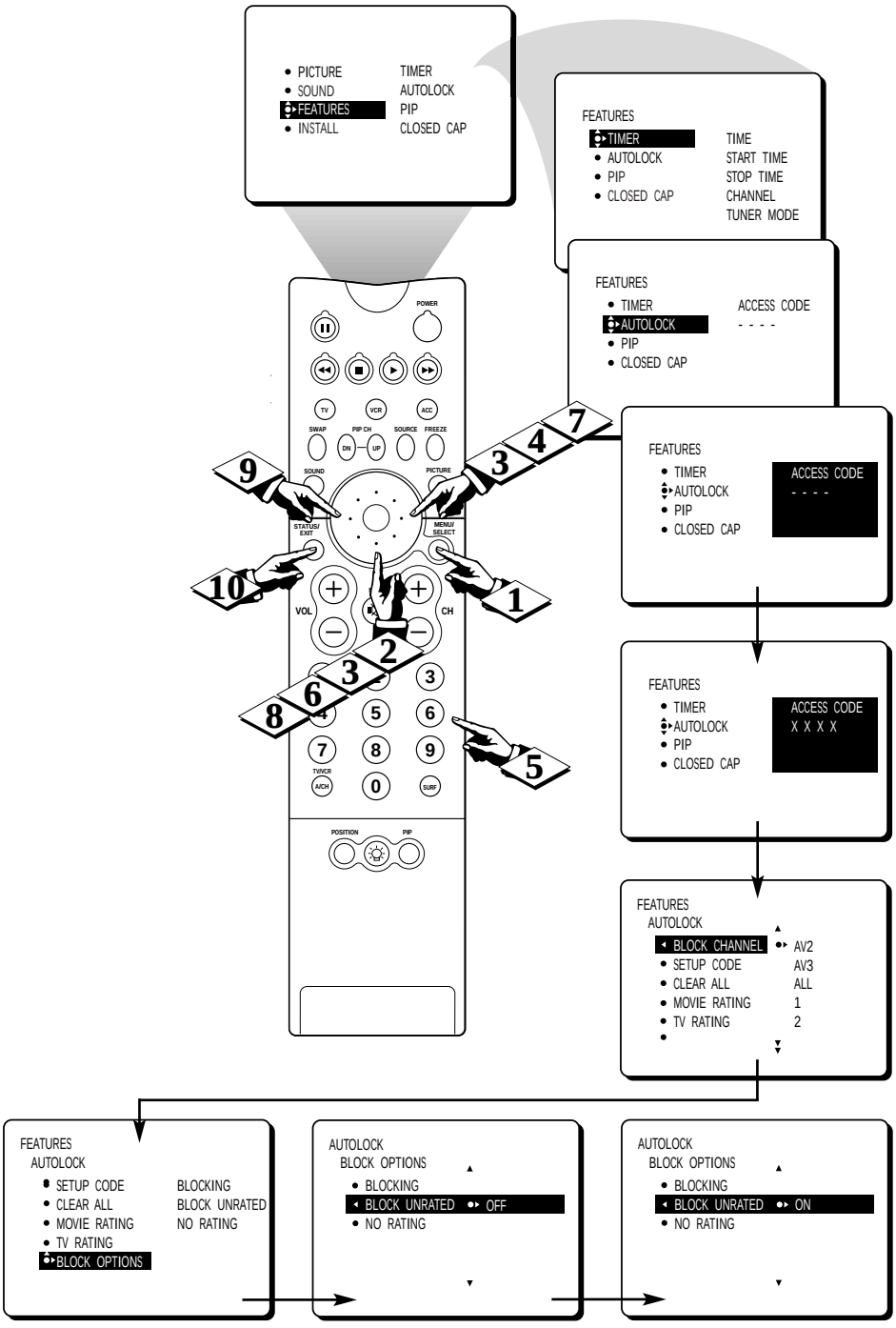
BLOCKING UNRATED BROADCASTS

In addition to blocking rated programs or channels, you may also choose to block all programming that is unrated.

BEGIN

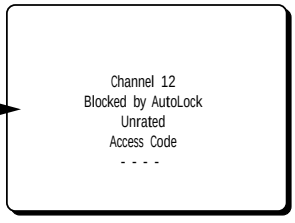
1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT** again to highlight ACCESS CODE.
5. **Enter your four-digit ACCESS CODE**.
6. **Press the CURSOR RING DOWN** repeatedly until BLOCK OPTIONS is highlighted.
7. **Press the CURSOR RING RIGHT** to enter the BLOCK OPTIONS menu.
8. **Press the CURSOR RING DOWN** once to select BLOCK UNRATED.
9. **Press the CURSOR RING RIGHT or LEFT** to turn BLOCK UNRATED ON or OFF.
10. **Press the STATUS/EXIT button** to remove the menu.

STOP



SMART HELP

When the BLOCK UNRATED control is turned ON, attempts to view unrated programs will bring a message like this to the screen. To watch the program, enter your access code or go into the BLOCK OPTIONS menu and turn the BLOCK UNRATED control OFF.



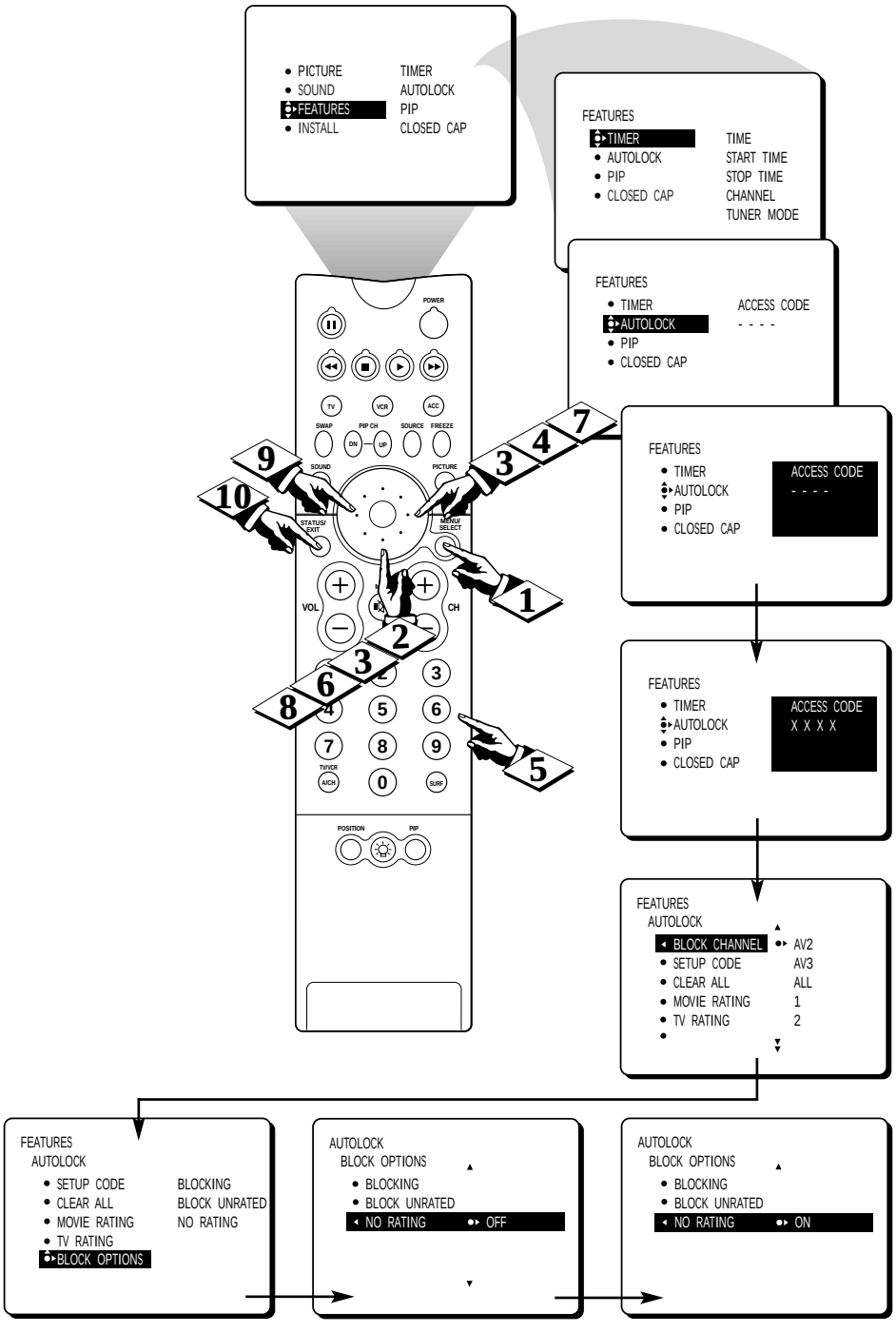
BLOCKING BROADCASTS THAT HAVE NO RATING

Some programs contain no content advisories from the Motion Picture Association of America or the television broadcasters (see page 20 for more on content advisories and ratings). To block such programs, follow these steps.

BEGIN

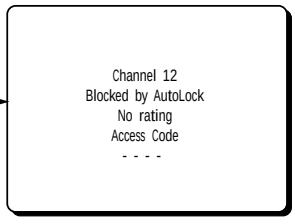
1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT** again to highlight the ACCESS CODE input area.
5. **Enter your four-digit ACCESS CODE**.
6. **Press the CURSOR RING DOWN** repeatedly until BLOCK OPTIONS is highlighted.
7. **Press the CURSOR RING RIGHT** to enter the BLOCK OPTIONS menu.
8. **Press the CURSOR RING DOWN** twice to highlight NO RATING.
9. **Press the CURSOR RING RIGHT or LEFT** to turn NO RATING ON or OFF.
10. **Press the STATUS/EXIT button** to remove the menu.

STOP



SMART HELP

If the NO RATING control is turned on, all programs having no content advisory information will activate a screen like this. To watch the channel, enter your access code or turn the NO RATING option OFF.



REVIEWING YOUR SETTINGS

You can access a screen that shows your AutoLock settings.

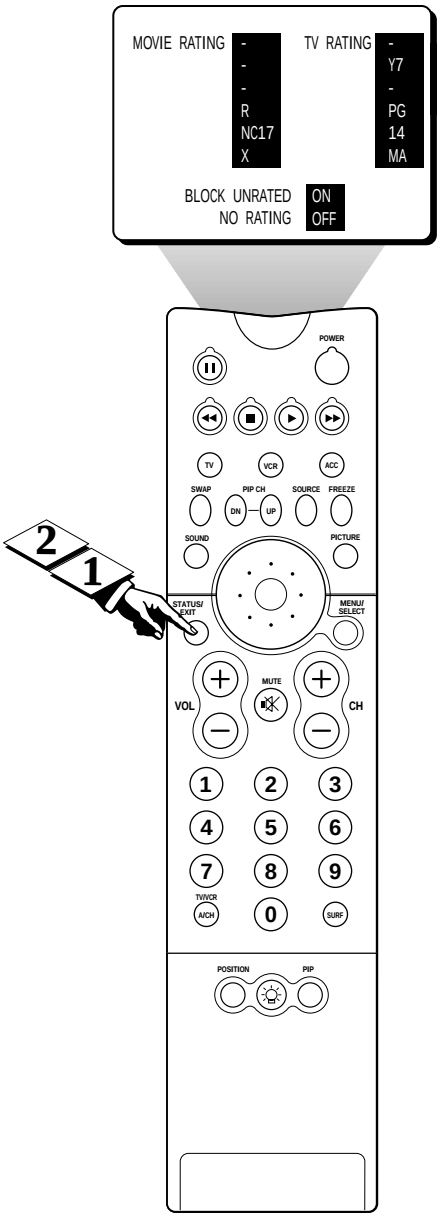
BEGIN

1 **Press the STATUS/EXIT button** on your remote twice. Your AutoLock settings will appear on the screen.

NOTE: If you have blocked specific subratings, such as *V* for Violence in the TV-PG category, these blocked subratings will not appear in the review. Nonetheless, the subratings are still blocked according to your selections.

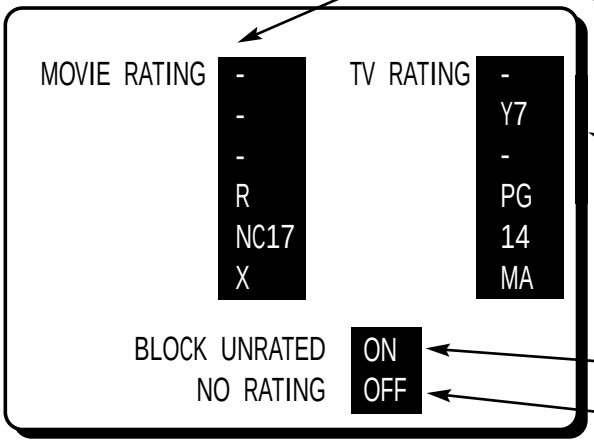
2 After a few seconds, the settings will leave the screen automatically, or you can **press the STATUS/EXIT button** to remove them from the screen.

STOP



SMART HELP

The AutoLock review screen will appear only if you have turned ON the BLOCKING control (see page 25).



MOVIE RATING—shows all the movie ratings that you have chosen to block within the MOVIE RATING control. **NOTE:** If a lower rating is blocked, higher ratings will also be blocked automatically. For example, if you block R-rated programs, those that are rated X will also be blocked.

TV RATING—shows all the TV ratings that you have chosen to block within the TV RATING control. **NOTE:** If a lower rating is blocked, higher ratings will also be blocked automatically. For example, if you block TV-PG-rated programs, those rated TV-14 and TV-MA will also be blocked. The TV rating controls also have subratings for Violence (V), Fantasy Violence (FV), Sexual Situations (S), Coarse Language (L), and Suggestive Language (D). If you turn off a main rating but turn on a subrating of that main rating control, programs having the subrating will be blocked; however, the main rating will not appear within the AutoLock review menu because you did not turn it ON.

BLOCK UNRATED—shows whether you have turned this control ON or OFF.

BLOCK NO RATING—shows whether you have turned this control ON or OFF.

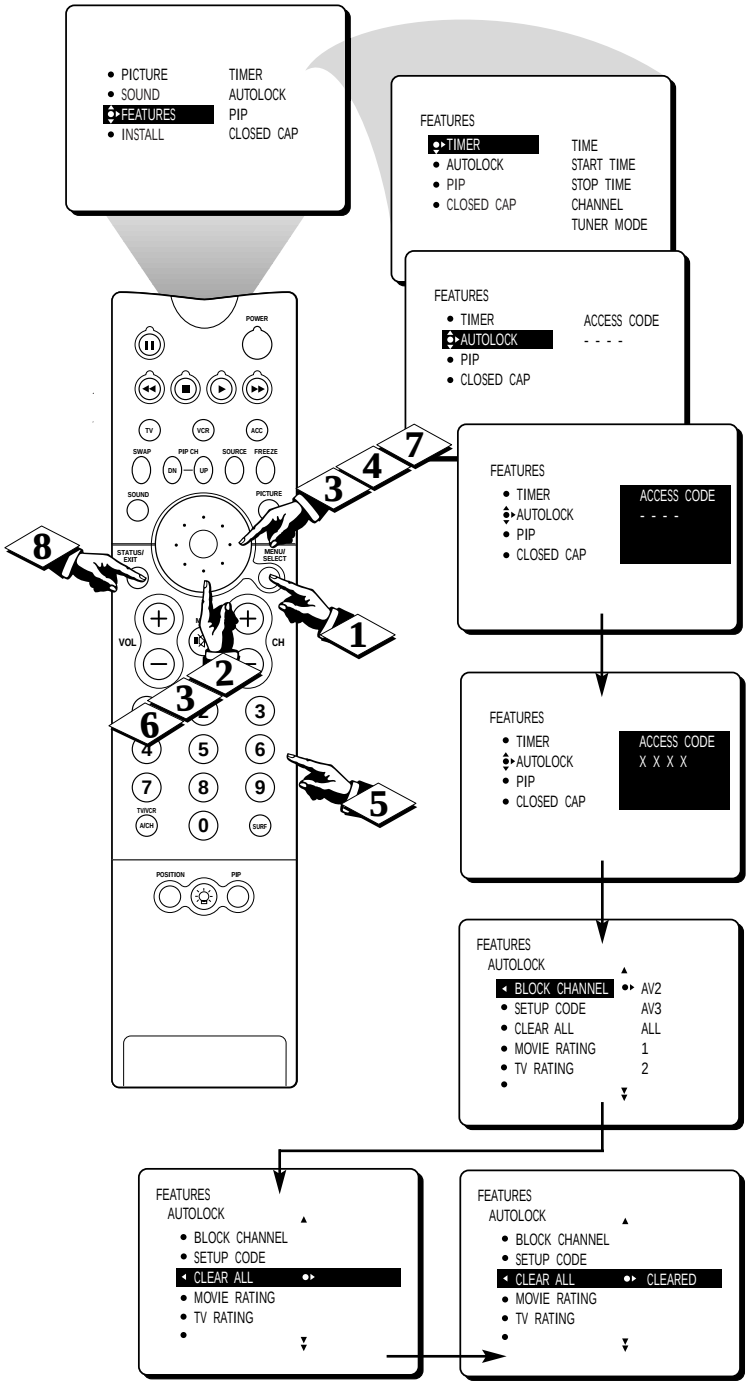
CLEARING ALL BLOCKED CHANNELS

The CLEAR ALL control will allow you to remove all channel blocks that have been turned on through the BLOCK CHANNEL control. To clear all channel blocks, follow the simple steps below.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT**. Then **press the CURSOR RING DOWN** once to highlight the AUTOLOCK control.
4. **Press the CURSOR RING RIGHT** again to highlight ACCESS CODE.
5. **Enter your four-digit ACCESS CODE**.
6. **Press the CURSOR RING DOWN** twice to highlight CLEAR ALL.
7. **Press the CURSOR RING RIGHT**. The CLEAR ALL option will display the word *CLEARED*. All blocked channels will then be viewable.
8. **Press the STATUS/EXIT button** to remove the menu.

STOP



SMART HELP

This control clears only the blocks placed on channels through use of the BLOCK CHANNEL control and will not turn off the MOVIE RATING, TV RATING, BLOCK UNRATED, or NO RATING control settings.

CC

USING THE CLOSED CAPTIONING CONTROL

Closed Captioning (CC) allows you to read the voice content of television programs on the TV screen. Designed to help the hearing impaired, this feature uses on-screen text boxes to show dialogue and conversations while the TV program is in progress.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight FEATURES.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING DOWN** repeatedly until the CLOSED CAP control is highlighted.
5. **Press the CURSOR RING RIGHT**. The menu will shift to the left and CAPTION MODE will be highlighted. Then **press the CURSOR RING RIGHT** again to highlight the CAPTION MODEs area.
6. **Press the CURSOR RING UP or DOWN** to select a CAPTION MODE.
7. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP

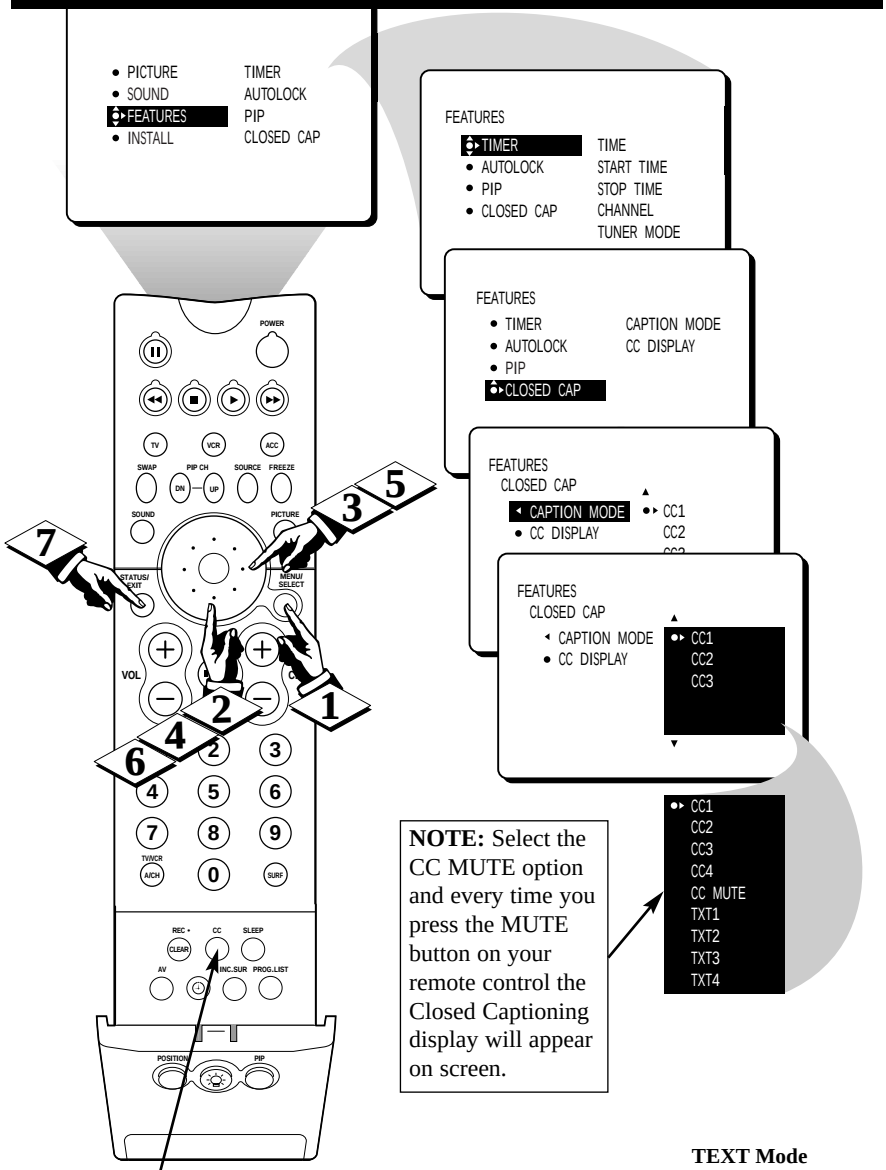
SMART HELP

CC DISPLAY—turns text on or off if the TV station broadcasting on the channel is making Closed Captioning available. Highlight CC DISPLAY and press the CURSOR RING RIGHT to turn this feature on or off.

CC MUTE—turns the Closed Captioning mode on whenever the MUTE button on the remote control is pushed. Select CC MUTE in the on-screen menu to turn this feature on. Closed Captioning cannot be used on the CVI (Component Video input) source.

SMART HELP

Not all TV programs and product commercials are broadcast with Closed Captioning (CC). Nor are all Closed Captioning MODEs necessarily being used by broadcast stations during a program offering Closed Captioning. Refer to your area's TV program listings for the stations and times of shows being broadcast with Closed Captioning.



NOTE: Select the CC MUTE option and every time you press the MUTE button on your remote control the Closed Captioning display will appear on screen.

You can press the CC button on the remote control to turn the Closed Captioning display on or off.

CAPTION Mode Example Display

TEXT Mode Example Display - The TV program is blocked by the Text screen.

CLOSE CAPTION PROGRAMS ON WXYZ
ALL ITEMS ARE EASTERN STANDARD TIME (EST)
CHECK LOCAL LISTINGS
FOR TIMES IN YOUR AREA
6:00 TOP OF THE MORNING
10:00 THE BEST LITTLE CALL-IN SHOW EVER
12:00 NOONDAY NEWS
1:30 AS YOUR LIFE TURNS MY WORLD AROUND
6:00 WORLD NEWS FOR TODAY
9:00 PLAYHOUSE MOVIE OF THE WEEK

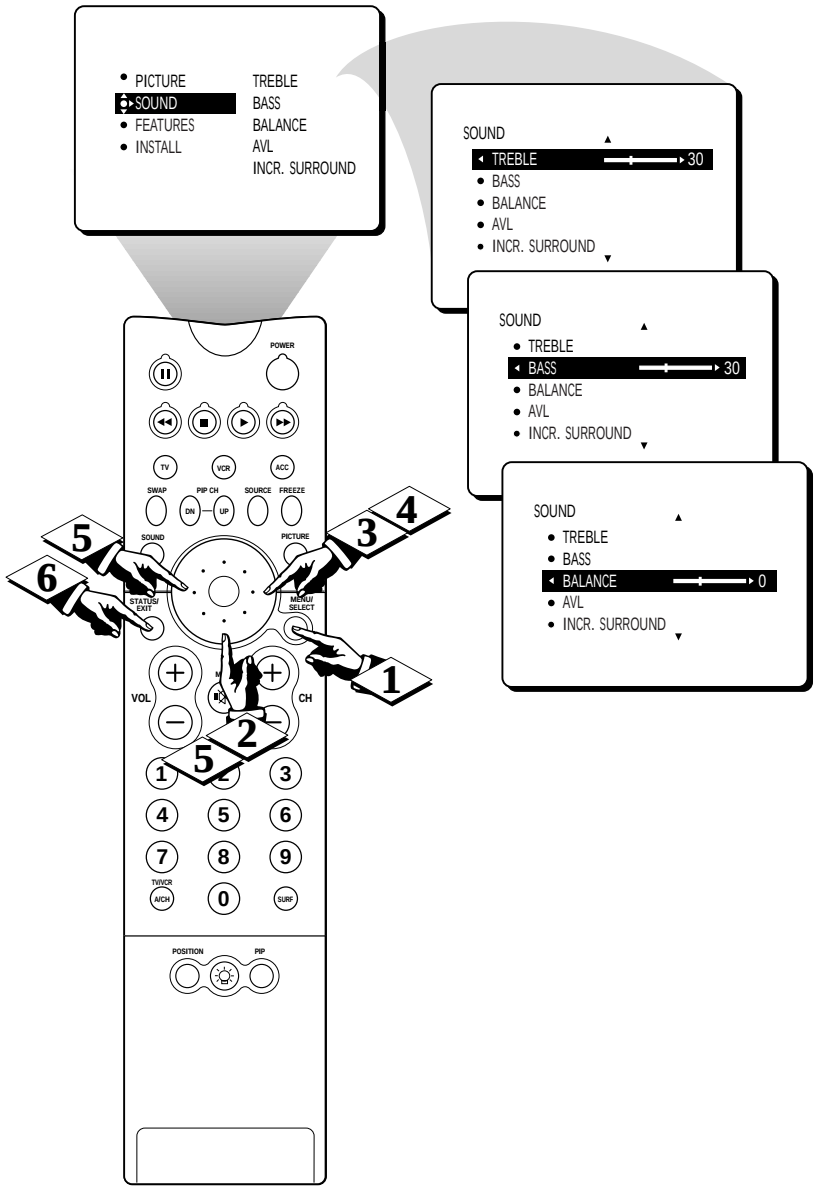
ADJUSTING THE TREBLE, BASS, AND BALANCE

Besides the normal volume level control, your TV also has individual sound-adjustment controls. You can use TREBLE (high frequency), BASS (low frequency), and Speaker BALANCE to further adjust the sound playback of TV programs.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** once to highlight SOUND.
3. **Press the CURSOR RING RIGHT** to enter the SOUND menu.
4. **Press the CURSOR RING RIGHT or LEFT** to adjust the TREBLE level of the television's sound.
5. After adjusting the TREBLE control, **press the CURSOR RING DOWN** to select another sound adjustment: BASS or BALANCE. **Then Press the CURSOR RING RIGHT or LEFT** to adjust the selected control.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

Remember, when the bar scale is centered, speaker sound BALANCE is centered between the TV's left and right side speakers.

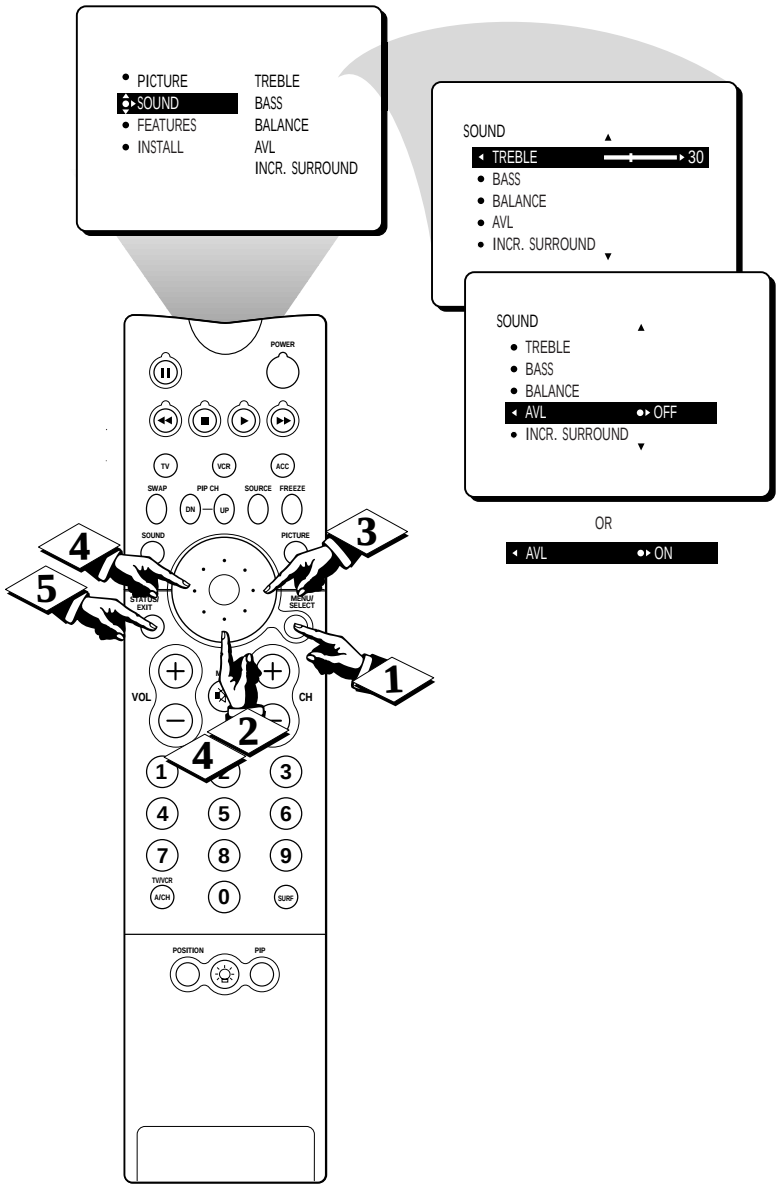
USING THE AVL (AUDIO VOLUME LEVELER) CONTROL

You may have noticed the peaks and valleys of sound that occur between program changes or at commercial breaks. The volume levels often vary considerably. By turning ON the AVL (Audio Volume Leveler) control, you can make your TV produce a more consistent volume level. Follow these steps to turn the AVL ON.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** once to highlight SOUND.
3. **Press the CURSOR RING RIGHT** to enter the SOUND menu.
4. **Press the CURSOR RING DOWN** repeatedly until AVL is highlighted. Then **press the CURSOR RING RIGHT or LEFT** to turn AVL ON or OFF.
5. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



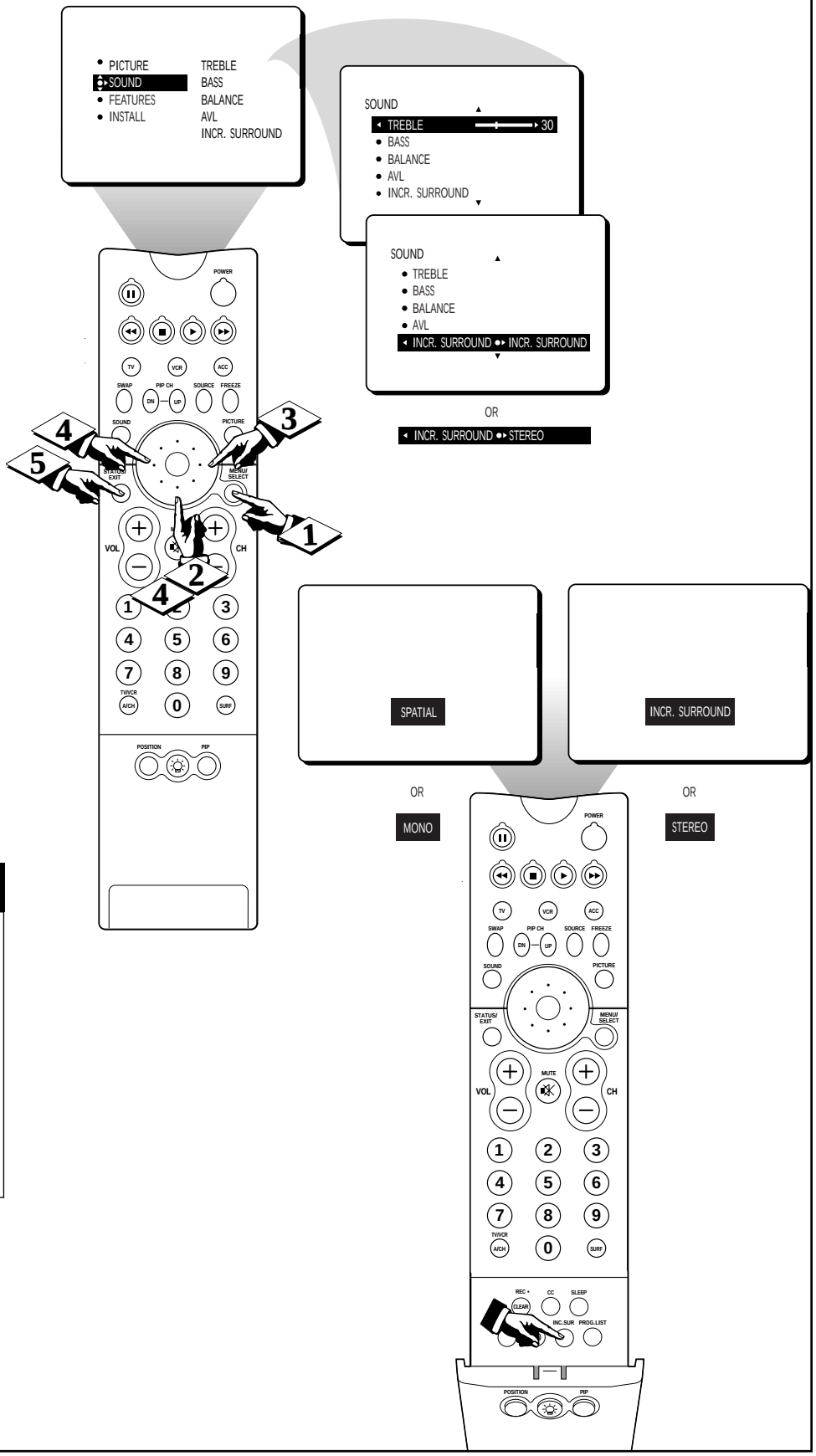
USING INCREDIBLE SURROUND

The Incredible Surround feature will boost the TV's sound by making it broader and fuller. Set the INCREDIBLE SURROUND control to INCREDIBLE SURROUND to enhance stereo programs. Or set the INCREDIBLE SURROUND control to SPATIAL to give a "surround" effect to mono programs.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** once to highlight SOUND.
3. **Press the CURSOR RING RIGHT** to enter the SOUND menu.
4. **Press the CURSOR RING DOWN** repeatedly until INCR. SURROUND is highlighted. Then press the **CURSOR RING RIGHT** or **LEFT** to select SPATIAL or MONO for a mono program, or INCR. SURROUND or STEREO for a stereo program.
5. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

Press the INC. SUR button on the remote to toggle between the same INCR. SURROUND control options discussed above: SPATIAL or MONO and INCR. SURROUND or STEREO. The options available to you will be determined by the program the TV is on when you push the INC. SUR button.

SETTING THE TV FOR STEREO AND SAP

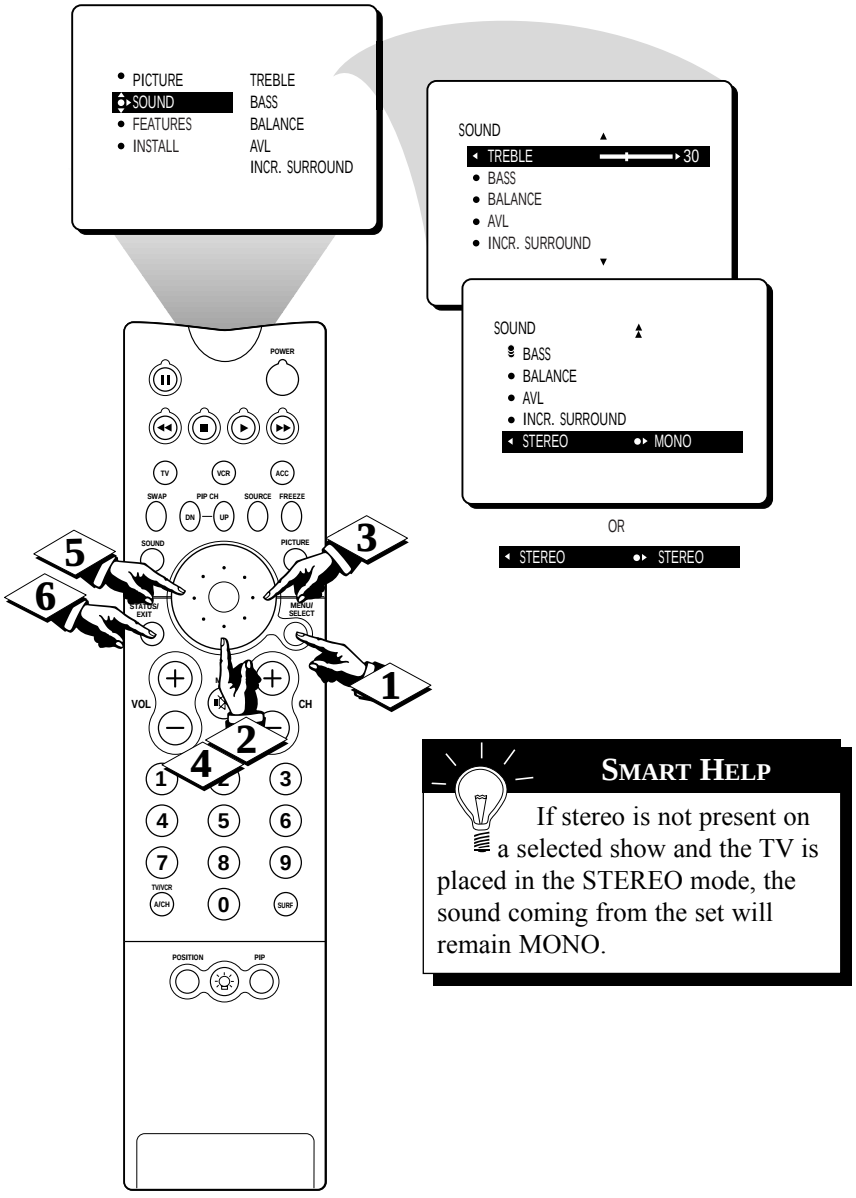
STEREO MODE

You can enjoy stereo programs on your TV. It has both an amplifier and twin speakers through which stereo sound can be heard. Follow these steps to select the STEREO mode.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** once to highlight the SOUND menu.
3. **Press the CURSOR RING RIGHT** to enter the SOUND menu.
4. **Press the CURSOR RING DOWN** repeatedly until the STEREO control is highlighted.
5. **Press the CURSOR RING RIGHT or LEFT** to select STEREO or MONO. When STEREO has been selected, the television will reproduce any stereo signal it receives.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



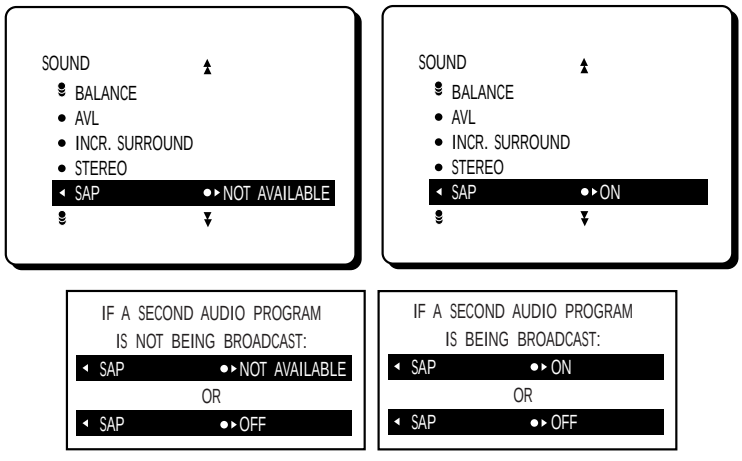
SMART HELP

If stereo is not present on a selected show and the TV is placed in the STEREO mode, the sound coming from the set will remain MONO.

SECOND AUDIO PROGRAM (SAP)

A Second Audio Program, or SAP, is an additional part of the stereo broadcast system. Sent as a third audio channel, an SAP can be heard apart from the current TV program sound. TV stations are free to use SAP for any number of purposes, such as the broadcast of a second language or other audio information.

If an SAP signal is not present with a selected program, the SAP option cannot be selected; NOT AVAILABLE will appear on screen. Also, if SAP is selected on a channel and you change to another channel, when you return to the original channel, SAP will be off. You will have to reselect the SAP feature.



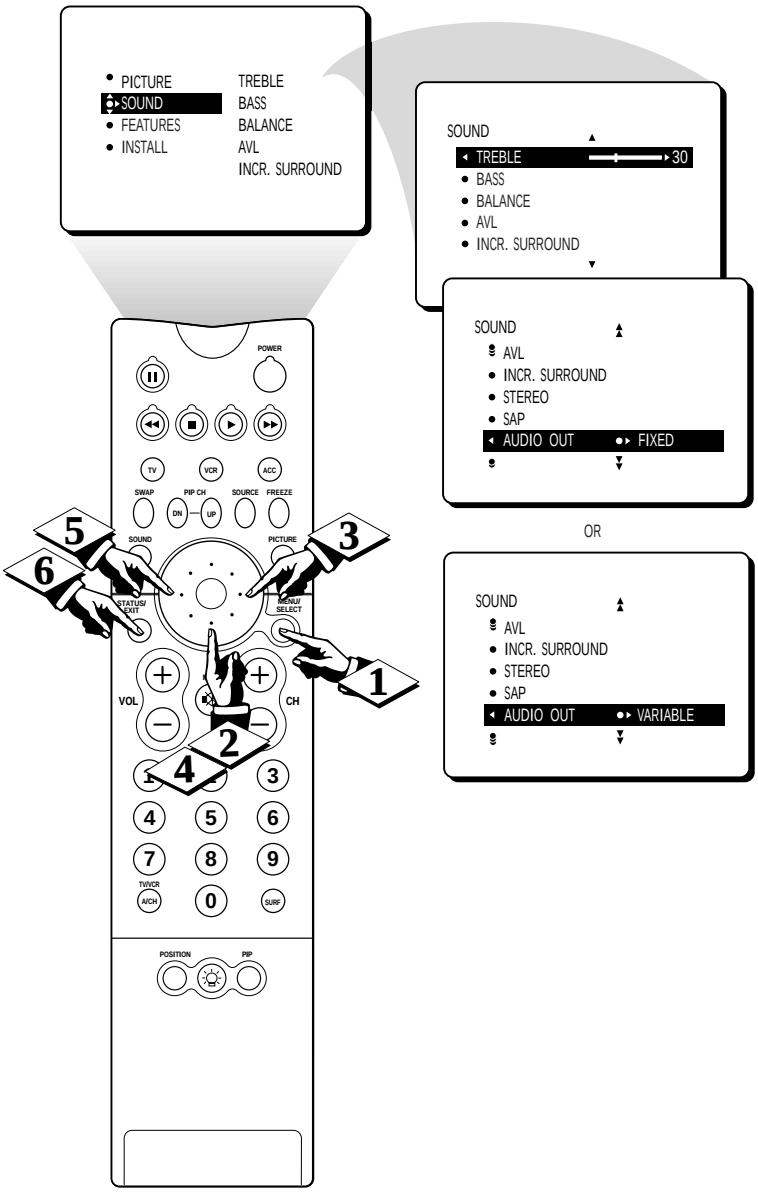
SETTING THE AUDIO OUT CONTROL

If you have connected the TV's AUDIO OUTPUT jacks to the AUDIO INPUT jacks on a stereo receiver, set AUDIO OUT to either VARIABLE or FIXED to determine whether you adjust the volume at the at the TV or at the stereo. If you select VARIABLE, change the volume at the TV using the TV's remote control. If you select FIXED, adjust the volume at the stereo using the stereo's controls. Follow these steps to make your selection.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** once to highlight SOUND.
3. **Press the CURSOR RING RIGHT** to enter the SOUND menu.
4. **Press the CURSOR RING DOWN** repeatedly until AUDIO OUT is highlighted.
5. **Press the CURSOR RING LEFT or RIGHT** to set the AUDIO OUT to VARIABLE or FIXED.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



USING THE TV SPEAKER CONTROL AND AUDIO OUTPUTS

Would you like to hear TV programs through your audio hi-fi system? The TV's Audio Outputs and SPEAKERS ON/OFF control work together to offer you this TV sound option.

BEGIN

1 **Use audio cables to connect the R(ight) and L(eft) AUDIO OUT(puts)** on the TV to the AUX/TV INPUTs on your amplifier or sound system. Set the audio system's volume to a normal listening level.

2 **Turn the TV and audio system ON.** You can now adjust the sound level coming from the audio system with the VOL(ume) (+,–) buttons on the TV or remote control.

To hear the TV sound from only the audio system speakers:

3 **Press the MENU/SELECT button** on the remote control to show the on-screen menu.

4 **Press the CURSOR RING DOWN** once to highlight SOUND.

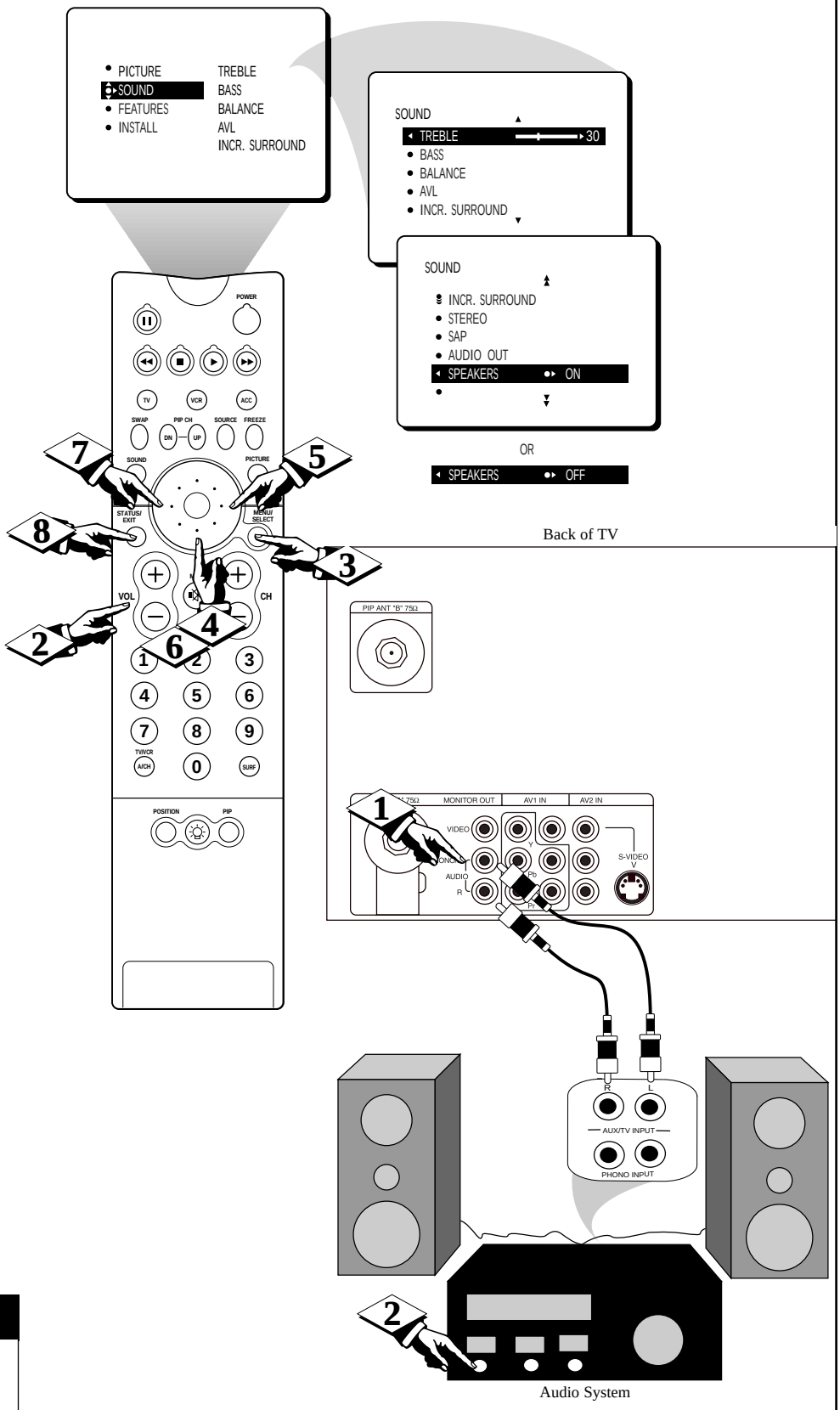
5 **Press the CURSOR RING RIGHT** to enter the SOUND menu.

6 **Press the CURSOR RING DOWN** repeatedly until the SPEAKERS control is highlighted.

7 **Press the CURSOR RING RIGHT or LEFT** to turn the television's speakers ON or OFF. With the SPEAKERS control set to OFF, you should hear the TV sound coming only from the audio system speakers.

8 **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



SMART HELP

The audio system may have to be in AUX(iliary) mode to play sound from the TV.

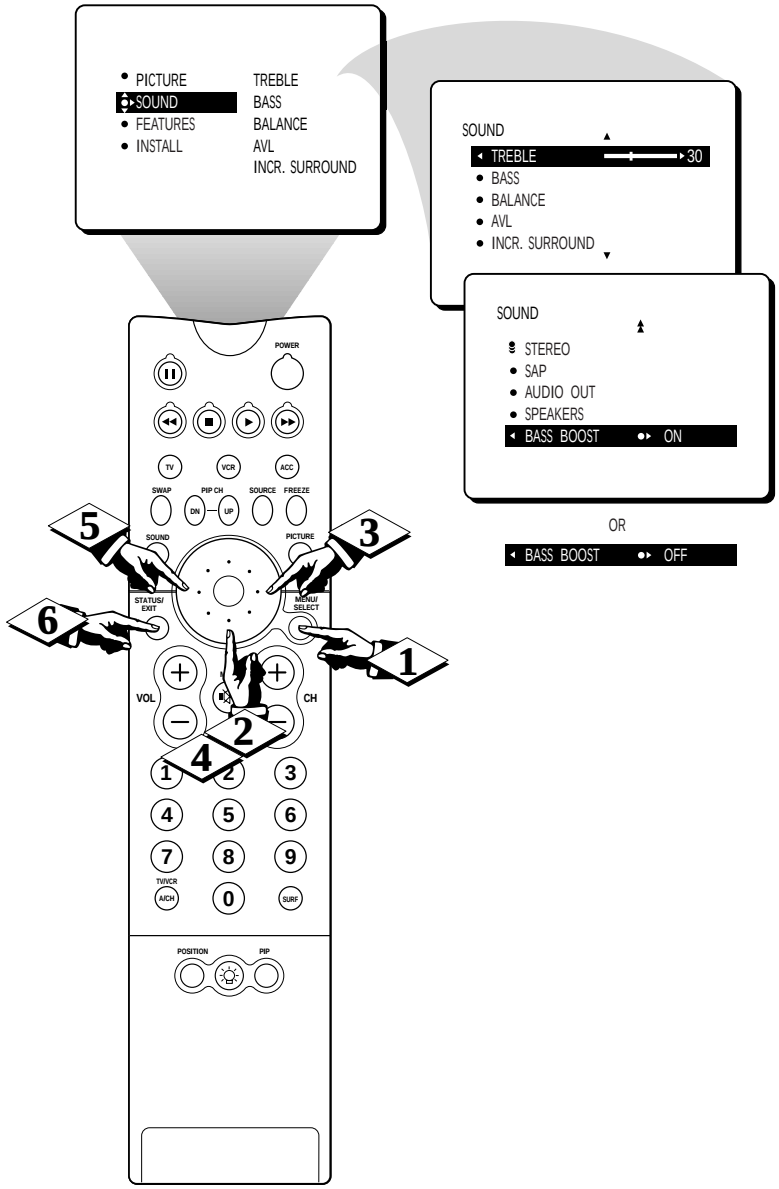
USING THE BASS BOOST CONTROL

The BASS BOOST control allows you to increase the low-frequency range of the TV's sound. This creates a deeper, fuller sound. Follow these steps to turn BASS BOOST ON.

BEGIN

1. **Press MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN once** to highlight SOUND.
3. **Press the CURSOR RING RIGHT** to enter the SOUND menu.
4. **Press the CURSOR RING DOWN** repeatedly until BASS BOOST is highlighted.
5. **Press the CURSOR RING RIGHT or LEFT** to turn BASS BOOST ON or OFF.
6. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



USING AUTOPICTURE

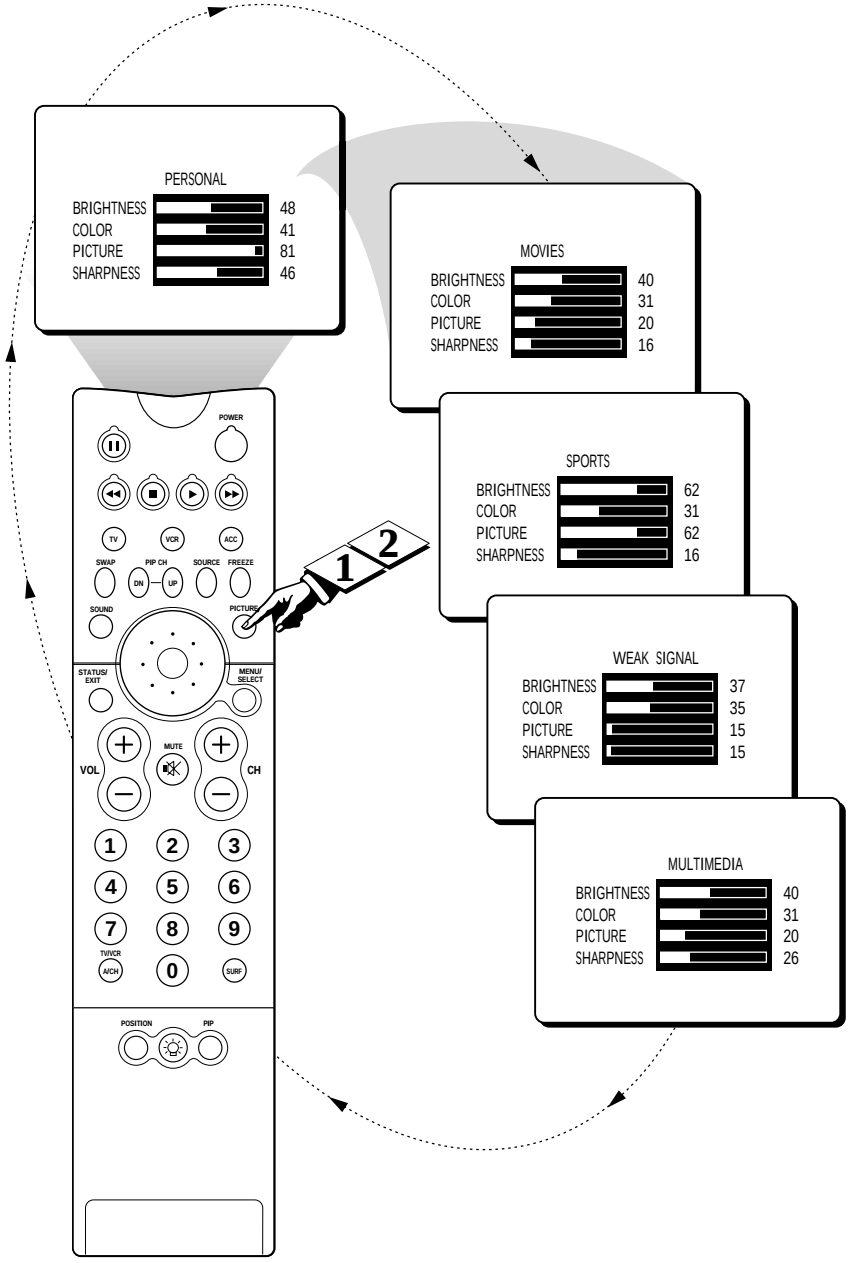
Whether you're watching a movie or playing a video game, your TV has automatic video control settings that will match with your current program source or content. AutoPicture quickly resets your TV's video controls for a number of different types of programs and viewing conditions that you may have in your home. The Movies, Sports, Weak Signal, and Multimedia AutoPicture controls have been preset at the factory to automatically adjust the TV's brightness, color, picture, sharpness, tint, and color temperature levels. The Personal AutoPicture settings are the ones that you made through the PICTURE options within the on-screen menu.

BEGIN

1 **Press the PICTURE button** on the remote control. The current AutoPicture setting will appear in the middle of the screen.

2 **Press the PICTURE button** repeatedly to select either PERSONAL, MOVIES, SPORTS, WEAK SIGNAL, or MULTIMEDIA picture settings.

STOP



SMART HELP

You determine the PERSONAL setting by adjustments you make within the PICTURE menu. The other AutoPicture settings are made at the factory and cannot be adjusted.

USING AUTOSOUND

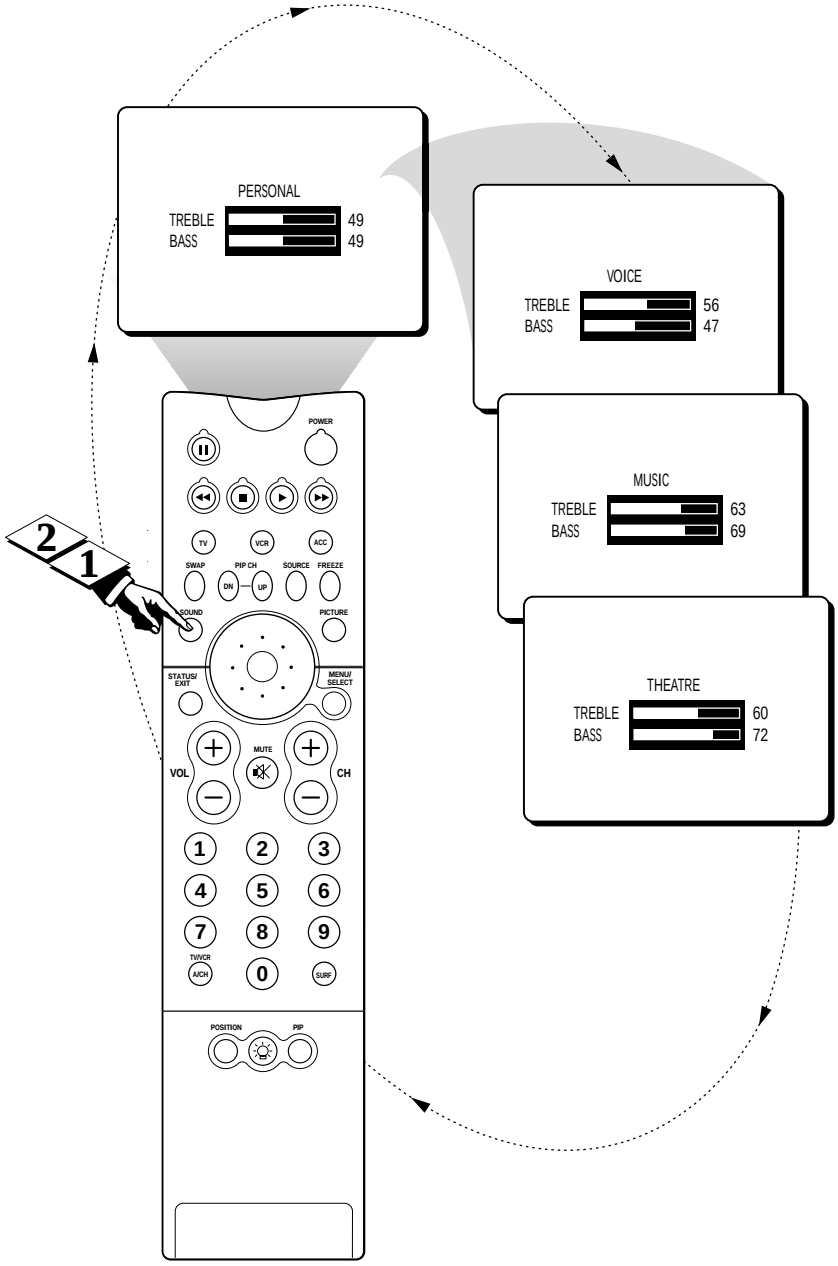
AutoSound allows you to select from three factory-set controls and a personal control that you set according to your own preferences through the on-screen Sound menu. The three factory-set controls (Voice, Music, and Theatre) enable you to tailor the TV sound so as to enhance the particular program you are watching. Follow these steps to select any of the options.

BEGIN

1. **Press the SOUND button** on the remote control. The current AutoSound setting will appear in the middle of the screen.

2. **Press the SOUND button** repeatedly to cycle through the four settings: PERSONAL, VOICE, MUSIC, or THEATRE.

STOP



SMART HELP

You determine the PERSONAL setting by adjustments you make within the SOUND menu. The other AutoSound settings are made at the factory and cannot be adjusted.

AutoSound works only with the programs coming through the ANTENNA/CABLE (ANT "A" or PIP ANT "B") inputs on the back of the TV. AutoSound will not control the sound levels of the other inputs on the back of the TV set.

AutoSound Choices

PERSONAL—presents the TV's sound according to the settings you make within the SOUND menu.

VOICE—brings voices to the forefront and emphasizes them. Moves music to the background.

MUSIC—emphasizes music over voices.

THEATRE—provides a balance between voices and music.

USING SURF, ALTERNATE CHANNEL, AND PROGRAM LIST

SURF

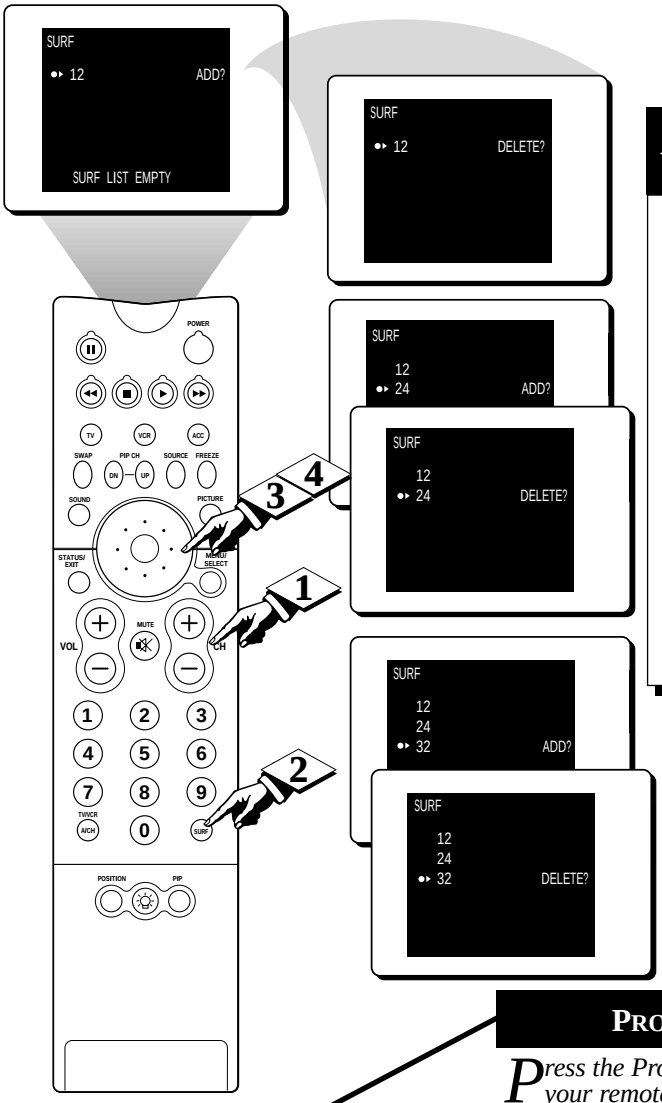
A list of previously viewed channels can be selected with the SURF button on your remote control. With SURF, you can easily switch between different TV channels that currently interest you. The SURF control allows you to set up to ten channels in its quick viewing list.

BEGIN

1. **Press the CH(annel) Scan (+,–) buttons** (or the NUMBER buttons) to select a channel to add to the SURF list.
2. **Press the SURF button** on the remote control. The on-screen display may read, "SURF LIST EMPTY." The number of the current channel will be shown with ADD? to the right.
3. While the SURF list message or the SURF channel list appears on the screen, **press the CURSOR RING RIGHT** to add the present channel to the SURF list.
4. If you want to delete the present channel from the SURF list, **press the CURSOR RING RIGHT** again.

Repeat steps 1 through 3 to add more channels (up to 10) to the SURF list.

STOP

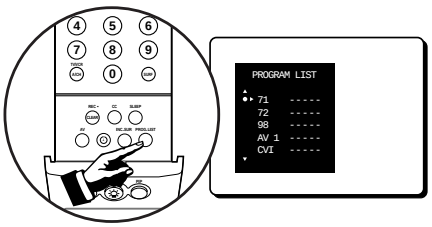


SMART HELP

Along with the broadcast channels, the external video source connections can be added to the SURF list. This means that the AV 1, CVI, AV 2, and AV 3 signal sources can be added to your SURF list. Just press the AV button on your remote to select the signal source and then follow steps 2–4 in the "Surf" section on this page.

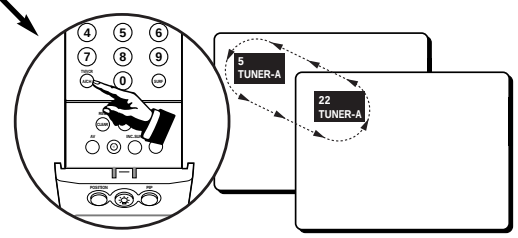
PROGRAM LIST

Press the Program List button on your remote to display a list of channel numbers and their names (see the "Tuner Mode" "Auto Program," "Channel Edit," and "Name" sections in the Setup and Quick Use Guide that came with your TV for proper setup). You can also access the Program List by pressing the button in the center of the Cursor Ring. Each channel will appear as a selectable menu item. The current channel will be highlighted by default. Only five channels will be shown on screen at one time. Press the top or bottom part of the Cursor Ring to scroll the list and and highlight a channel. Press the right side of the Cursor Ring to tune to the highlighted channel. Channels marked "Skipped" in the "Channel Edit" control will not appear in the list. Any channel that is being blocked by AutoLock will appear with a padlock icon to indicate that the channel is not viewable.



ALTERNATE CHANNEL (A/CH)

Your remote also has an A/CH (Alternate Channel) button. Pressing this button will toggle between the current channel and one previous channel.



USING THE SLEEP TIMER CONTROL

Have you ever fallen asleep in front of the TV, only to be awakened in the middle of the night by the screeching sound that accompanies the on-screen test pattern of a station that's signed off? Your TV can enable you to avoid that discomfort by automatically turning itself off. You choose the amount of time before the set turns off.

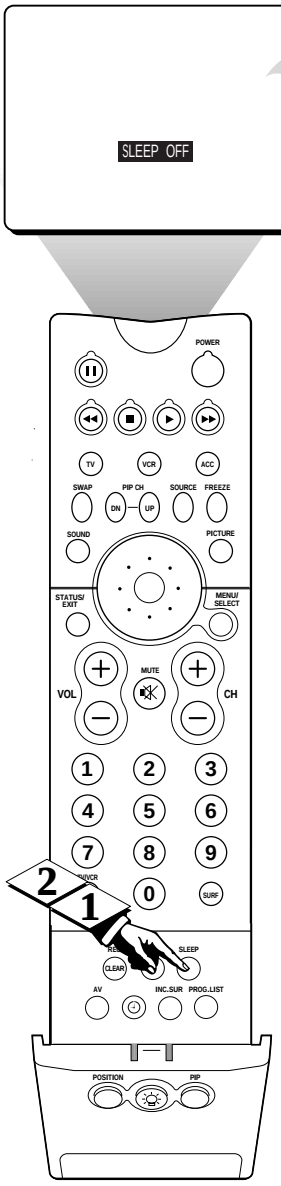
BEGIN

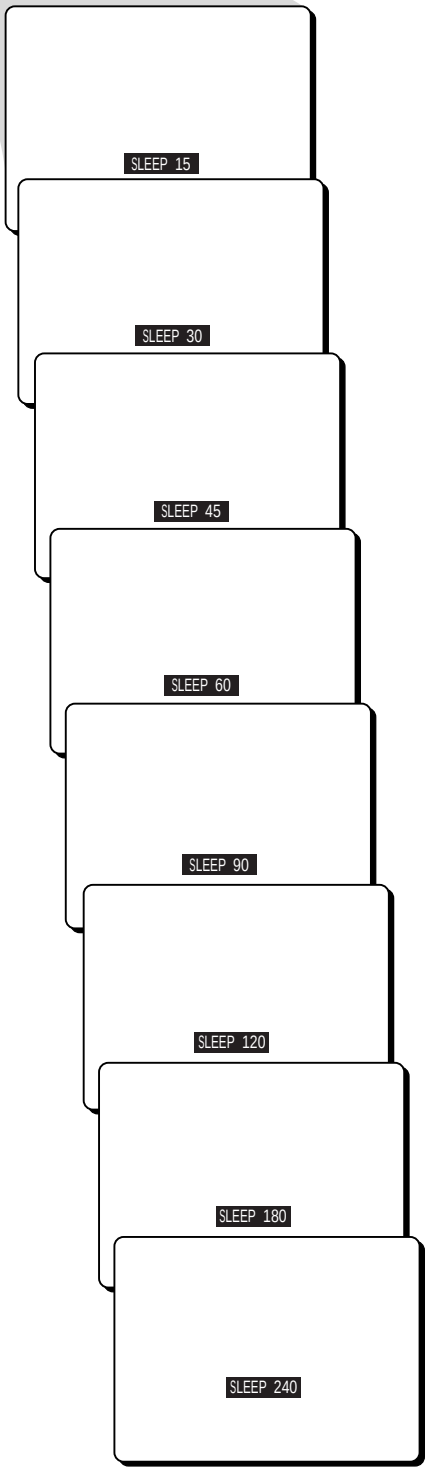
1. **Press the SLEEP button** on the remote control. The SLEEP Timer on-screen display will appear in the upper part of the screen.

2. **Within five seconds, press the SLEEP button** repeatedly to pick the amount of time before the TV will turn itself off.

   An on-screen countdown will appear during the last minute before the TV turns off.

STOP

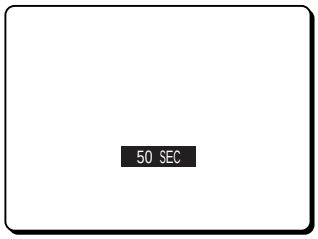




SMART HELP

To see how many minutes remain before the TV shuts itself off, press the STATUS/EXIT button.

During the last minute of a Sleep Timer setting, an on-screen countdown will be displayed.



During the last 10 seconds of a Sleep Timer setting, the on-screen display will read "GOOD BYE."

USING THE VOLUME BUTTONS

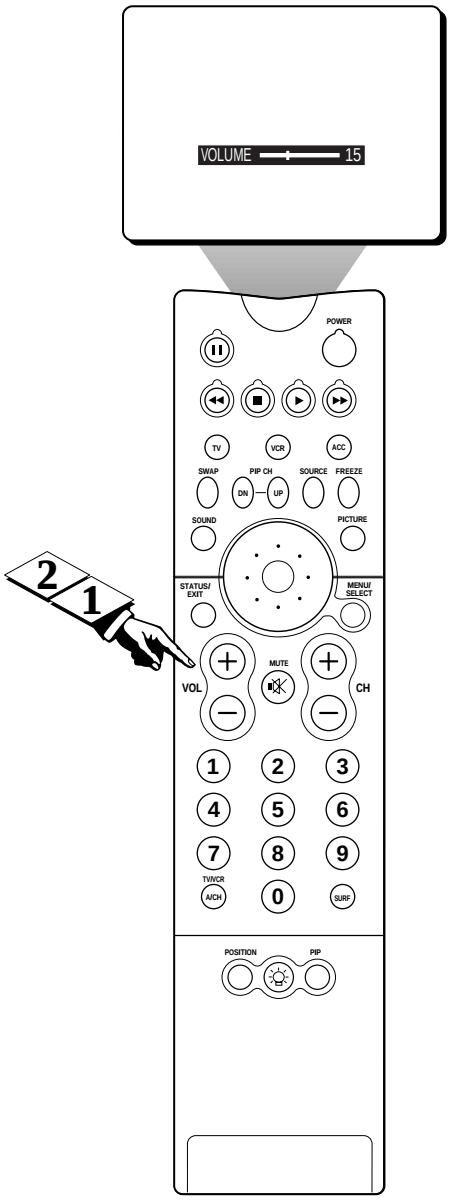
Press the VOL(ume) (+, –) buttons on the remote and the volume adjustment bar will appear on screen and move to illustrate the adjustments you make.

BEGIN

1 **Press the VOL(ume) (+,–) buttons** on the remote control to show the VOLUME bar display on the screen.

2 **Press the VOL(ume) (+,–) buttons** to adjust the TV's sound level.

STOP



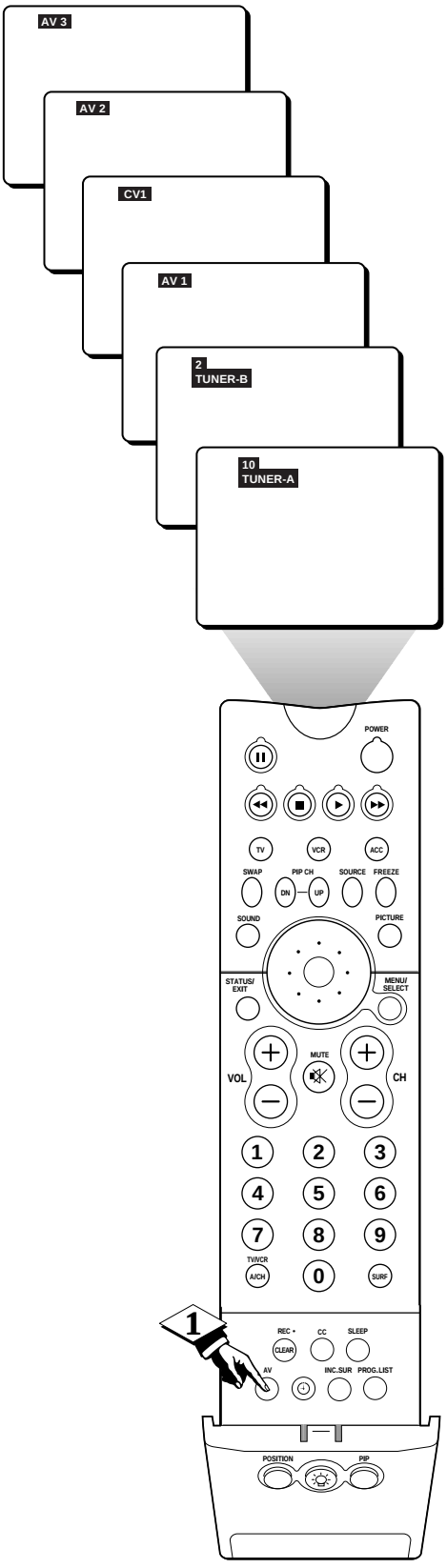
USING THE AV BUTTON

The AV button on your remote control allows you to choose from among the signal sources you have connected to your TV. The possibilities are TUNER-A (the ANT[enna] "A" input), TUNER-B (the PIP ANT[enna] "B" input), AV 1, CVI, AV 2, and AV 3 (your TV's side inputs).

BEGIN

1 **Press the AV button on the remote control** to choose a signal source for viewing.

STOP



SETTING THE TV REMOTE TO WORK ACCESSORY DEVICES

Your TV remote is capable of working not only your TV but also infrared remote (IR) controlled devices such as VCRs, cable TV converter boxes, satellite receivers, DVD players, and laser disc players.

If you want to use your TV remote to operate a VCR or other accessory device, you will need to perform this initial check explained in this section. You may also need to go to the sections on the "Direct Access Method" and the "Search Method" in the pages that follow.

BEGIN

1 **Press the VCR or ACC(essory) mode button** on the TV remote for the desired accessory device category.

NOTE: pressing the ACC(essory) mode button allows access to the product codes for cable TV converters, DVD players, satellite receivers, and laser disc players.

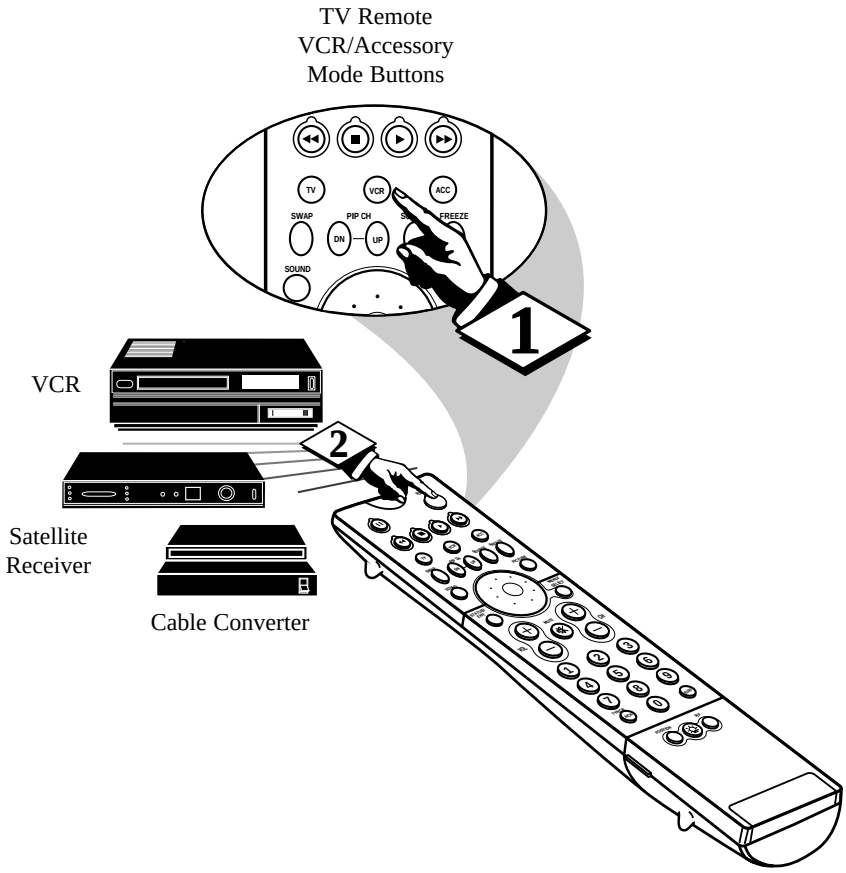
2 **Point the TV remote** toward the desired accessory device and press the POWER button.

Does the remote turn the accessory device on?

If yes, STOP and try other function buttons on the TV remote. If they also work the accessory device, then the remote is ready and no further steps are needed.

If no, do the following:

Look up a **three-digit remote code numbe**r on page 47 or 48 for your brand of accessory device. Then go through the simple Direct Access Method steps shown on page 45.



SMART HELP

If more than one number is listed, you may have to try more than the first three-digit code given to locate your device's correct code.

SETTING THE TV REMOTE TO WORK ACCESSORY DEVICES

DIRECT ACCESS METHOD

Now that you have looked up the three-digit Remote Control Direct Entry Code for your brand of accessory device, you are ready to follow the simple steps shown below.

Please read through all the steps before beginning.

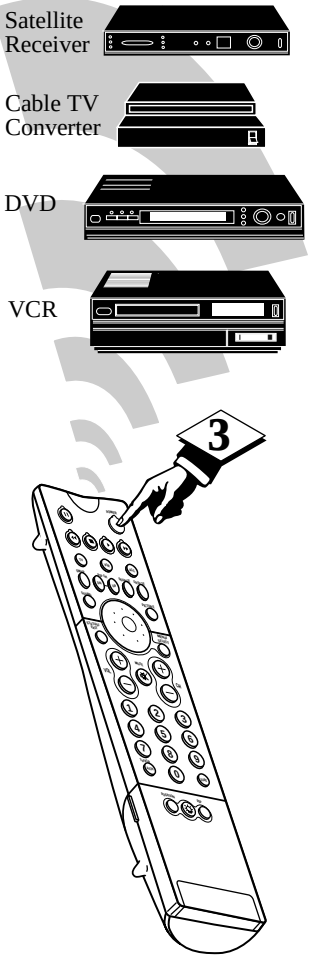
BEGIN

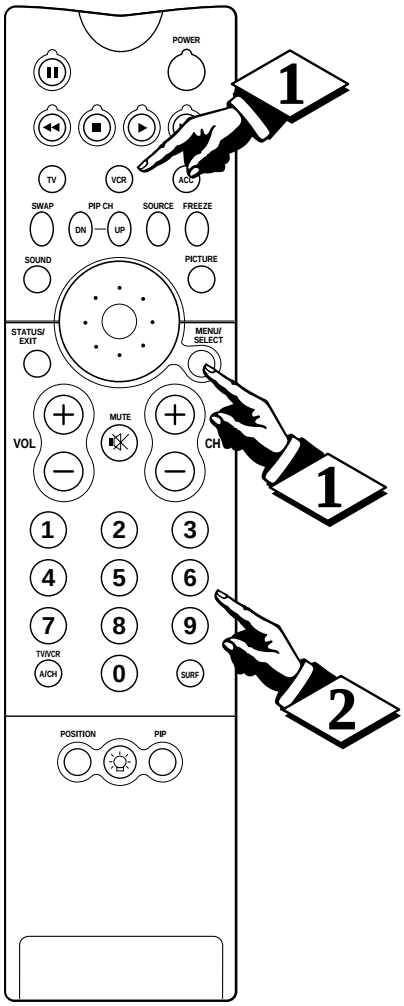
1 **First, press and hold down the VCR or ACC (for an accessory device other than a VCR) mode button** on the TV remote. Then press and hold down the MENU/SELECT button at the same time for a brief moment. Release the buttons. The TV remote back light will switch on.

2 **Within 30 seconds of pressing the VCR (or ACC) button and MENU/SELECT button, enter a three-digit code for the accessory device** (see pages 47 and 48).

3 **Point the remote at the accessory device.** Then press the POWER button on the remote to turn the device on.

STOP





SMART HELP

- Pressing the ACC(essory) mode button allows access to the product codes for accessory devices.
- If the procedure explained above does not work the first time, repeat the steps using the same remote code number.
- If after a second try the remote does not operate your accessory device, and more code numbers are listed for your brand, use the next listed code number.
- If after repeated attempts the Direct Access Method does not allow you to work your accessory device with your TV remote, try the Search Method explained on the next page.

NOTES:

- If you do not enter a complete code within 30 seconds, you will need to perform step 1 of the Direct Access Method again.
- If you enter more than three digits, the unit will retain the first three digits entered.

SETTING THE TV REMOTE TO WORK ACCESSORY DEVICES

SEARCH METHOD

Your TV remote can be set to work various accessory devices (VCRs, cable converters, and satellite receivers, for example) by what is called the Search Method.
***NOTE:** The Search Method works only with devices equipped with Channel Display Indicators or that capability. If the Direct Access code number method (shown in the previous section) did not enable your TV remote to work your accessory device, then follow the easy steps listed below. Please read the steps once before performing them.*

BEGIN

1. **Turn on the desired device. Press and hold down the VCR or ACC (for an accessory device other than a VCR) mode button** on the TV remote. Then press and hold down the SURF button as you hold down the desired mode (VCR or ACC) button.

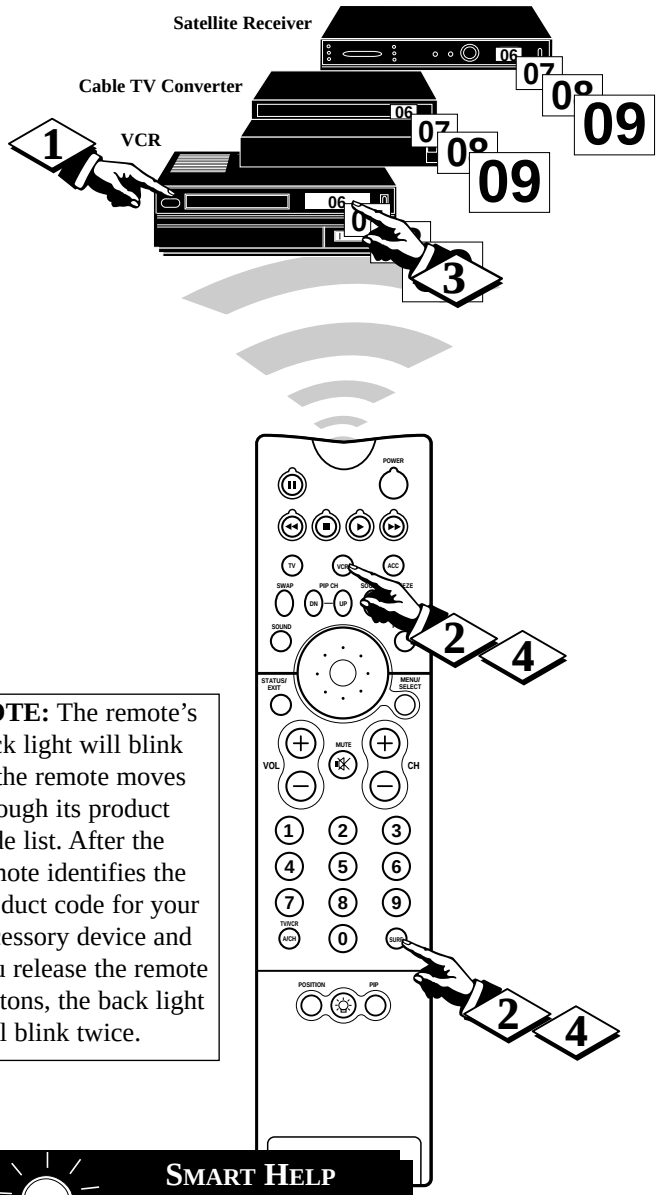
   NOTE: You must press and hold down the desired mode (VCR or ACC) button first and then press and hold down the SURF button second.

2. **While holding down the SURF and the desired mode (VCR or ACC) buttons at the same time, point the remote** toward the accessory device and continue holding the buttons down.

3. **Watch the Channel Indicator** on your accessory device. Channel numbers will scan up when the TV remote has identified the correct code for your accessory device. This may take several minutes.

4. **Release the mode (VCR or ACC) and SURF buttons** as soon as channel numbers start to scan up. The scanning means that your TV remote has found the code for your accessory device.

STOP



NOTE: The remote's back light will blink as the remote moves through its product code list. After the remote identifies the product code for your accessory device and you release the remote buttons, the back light will blink twice.

SMART HELP

- Your TV remote may locate the accessory device's code quickly or require several minutes to do so.
- Don't let the accessory device scan up more than five channels when the correct code is found—the remote may pass up the right code and have to repeat the search cycle.
- If no channel change happens after several minutes, repeat steps 1–4. Then if a channel change still does not occur, the remote will not work the desired accessory device.

SETTING THE TV REMOTE TO WORK ACCESSORIES

Remote Control Direct Entry Codes

VCR BRAND AND REMOTE CODE(S)

Admiral 075, 236
Adventura 027
Aiko 305
Aiwa 334, 495, 027, 064
Akai 133, 080, 068, 076, 088, 183, 269
America Action 305
American High 062
Asha 267
Audiovox 064
Beaumark 267
Bell & Howell 131
Broksonic . . . . . .148, 211, 029, 236, .238, 322, 388, 506
CCE 099, 305
Calix 064
Canon 194, 062, 129
Capehart 047
Carver 108
Cineral 305
Citizen 305, 064
Colt 099
Craig 064, 099, 074, 267, 298
Curtis Mathes 062, 068, 087, 189
Cybernex 078, 267
Daewoo 305, 588, 047, 072
Daytron 047
Denon 069
Dynatech 027
Electrohome 064
Electrophonic 064
Emerex 059
Emerson . . . . .211, 029, 236, 305, 063, 148, 238, .588, 235, 321, 506, 088, 115, 239, .027, 064, 070, 095, 322, 388, 537
Fisher 074, 131, 081, 093
Fuji 060, 062
Funai 027
GE 062, 087, 075, 092, 229, 267
Garrard 027
Go Video 306, 459, 553, 259
GoldStar 064, 045, 065, 498, 507
Gradiente 035, 027, 435
Grundig 222
HI-Q 074
Harley Davidson 027
Harman/Kardon 065, 102, 108
Harwood 095, 099
Headquarter 073
Hitachi 069, 193, 132, 092, 027, 068, 109
Hughes Network Systems 069
JVC 094, 035, 233, 234, 068, 411
Jensen 068
KEC 064, 305
KLH 099
Kenwood 068, 094, 411, 065
Kodak 062, 064
LXI 064
Lloyd's 027, 235
Logik 099
MEI 062
MGA 070, 088, 267
MGN Technology 267
MTC 027, 267
Magnasonic 305
Magnavox 062, 108, 137, 130, 027, 066, 176
Magnin 267
Marantz 108, 062
Marta 064
Matsushita 062, 189, 481
Memorex .131, 074, 506, 027, 064, 075, 062, 073, .267, 334, 066, 189, 236, 481, 828, 829
Minolta 132, 069
Mitsubishi . . .070, 200, 088, 102, 241, 269, 075, 094, 470
Motorola 062, 075
Multitech 027, 099
NAD 085
NEC 065, 067, 068, 077, 094, 109, 131
Nikko 064
Nikon 061, 280
Noblex 267
Olympus 062, 253
Optimus . . . . . .189, 481, 075, 085, 064, .131, 459, 827, 828, 829
Optonica 089
Orion 506, 029, 211, 236, 322
Panasonic . . . . . .062, 189, 481, 253, 104, 405, .129, 252, 254, 273, 827, 828, 829
Penney 062, 267, 064, 069, 065, 067, 081
Pentax 069, 092, 132
Philco 062, 236, 506
Philips 108, 062, 089, 137, 830, 831
Pilot 064
Pioneer 085, 195, 094
Polk Audio 108
Portland 047
Profitronic 267
Proscan 087, 229
Protec 099
Pulsar 066, 078
Quarter 073
Quartz 073
Quasar 062, 189, 104, 481, 828
RCA . . . . . .087, 176, 229, 069, 132, 062, .075, 092,104, 133, 267, 304
Radio Shack 027
Radix 064
Randex 064
Realistic . . . . . .027, 131, 074, 075, .064, 062, 089, 073, 93
Ricoh 061, 280
Runco 066
STS 069
Salora 102
Samsung 072, 078, 080, 267
Sanky 066, 075
Sansui 068, 506, 027, 094, 109, 236, 298
Sanyo 074, 073, 131, 267
Scott 211, 238, 148, 070, 072, 237, 239
Sears . . . . . .081, 132, 064, 069, 027, .062, 073, 074, 093, 131
Semp 072
Sharp 075, 089
Shintom 099
Shogun 078, 267
Singer 099
Sony 060, 061, 059, 280, 027, 038, 062
Sunpak 280
Sylvania 062, 108, 027, 070, 130, 137
Symphonic 027
TMK 063, 235, 267
Tatung 068
Teac 027, 068
Technics 062, 189, 273
Teknika 027, 062, 064, 079
Thomas 027
Toshiba 072, 237, 239, 070, 093, 393
Totevision 064, 267
Unitech 267
Vector 072
Vector Research 065, 067
Video Concepts 067, 072, 088, 248
Videosonic 267
Wards . . . . . .062, 087, 089, 027, 074, 239, .267, 069, 075, 099, 108, 176
White Westinghouse 099, 305, 236
XR-1000 . . . . . .099, 027, 062
Yamaha 065
Zenith 066, 027, 060, 061, 236, 506

CABLE CONVERTER BRAND AND REMOTE CODE(S)

ABC . . . . . .030, 028, 034, 035, .038, 040, 041, 044, 060
Allegro 180, 342
Antronix 049, 234
Archer 049, 066, 180, 234, 824
BBT 294
Belcor 083
Bell & Howell 041
Cable Star 083
Cabletenna 049
Cableview 049
Century 180
Citizen 180, 342
Colour Voice 052, 058
Comband 259
Comtronics 067, 087
Contec 046
Digi 664
Eastern 029
Emerson 824
Everquest 042, 067
Focus 427
GC Electronics 083, 234
GE 259
Garrard 180
Gemini 042, 097, 269, 824
General Instrument 303, 503, 038, 837
GoldStar 067, 171
Goodmind 824
Hamlin 047, 036, 286, 061, 300
Hitachi 038
Hytex 034
Jasco 042, 180, 342

See the next page for more codes.

SETTING THE TV REMOTE TO WORK ACCESSORY DEVICES

Remote Control Direct Entry Codes

CABLE CONVERTER BRAND AND REMOTE CODE(S)

Jerrold .....030, 039, 303, 041, ...503, 038, 051, 042, 837
Linsay 467
Macom 060
Magnavox 054
Memorex 027
Movie Time 090, 183
NSC 183, 090, 097
Novaplex 645
Oak 046, 034
Optimus 048
Panasonic 048, 134, 027
Panther 664
Paragon 027
Philips 052, 058, 269, 317, 054, 180
Pioneer 171, 050, 560
Popular Mechanics 427
Prelude 797
Pulsar 027
Quasar 027
RCA 048
Radio Shack 042, 847, 342, 824
Realistic 234
Recoton 427
Regal 300, 047, 286
Regency 029
Rembrandt 038, 097
Runco 027
SL Marx 067
Samsung 067, 171
Scientific Atlanta 035, 044, 033, 504
Seam 537
Signal 042, 067
Signature 038
Sprucer 048
StarSight 569, 449
Starcom 030, 042
Stargate 067, 042, 797, 824
Starquest 042
Sylvania 028
TFC 337
TV86 090
Tandy 285
TeleCaption 248
Teleview 067
Texscan 028
Timeless 445
Tocom 039, 040
Toshiba 027
Tusa 042
Unika 180, 234, 049
United Artists 034
Universal 234, 049, 066, 083, 180, 218
Viewstar 285, 054, 087, 090
Zenith 027, 552, 081
Zentek 427

SATELLITE RECEIVER BRAND AND REMOTE CODE(S)

AlphaStar 799
Amplica 099
Amway 070, 102
Arunta 548
Astro Industries 122
BMC 114
BSR 122
Cable Innovations 581
Capetronic 122
Century 565
Channel Master 045, 239
Chaparral 080, 236, 243
Citoh 191
Conifer 031
Curtis Mathes 088, 099
DX Antenna 068
Drake 091, 272, 045, 176
Echostar 307, 802, 175, 186, 296
Expressvu 802
General Instrument 388, 896, 574, 581, 654
Gould 082
HNS 644
HTS 802
Hitachi 846
Homecable 265
Hughes Network Systems 776
Hytek 122
IQ 237
IQ Prism 237
Intersat 070
JVC 802
Janeil 179
Jerrold 388, 654
Legend 296
Macom 088, 045
Magnavox 749, 751
Memorex 296, 751
Next Level 896
Norsat 031
Panasonic 179, 728
Philips 227, 749, 751
Pico 102
Primestar 654, 388
RCA 593, 170, 882
Radio Shack 581, 896
Ramsey 102
Realistic 079, 078
STS 237, 068
Sony 666
Star Choice 896
Star Trak 207, 448, 574
Strong 448
Toshiba 109, 776, 817, 088
Town & Country 574
Uniden ..... 265, 079, 101, 397, ... 581, 751, 103, 323, 749
Zenith 091, 883, 088

DVD BRAND AND REMOTE CODE(S)

Denon 859
GE 862
Harman/Kardon 871
JVC 868
Kenwood 865
Magnavox 860
Marantz 866
Mitsubishi 861
Onkyo 860
Optimus 869
Panasonic 859
Philips 866, 860
Pioneer 869, 863
Proscan 862
RCA 862
Samsung 870
Sony 864
Technics 859
Theta Digital 869
Toshiba 860
Yamaha 859, 867
Zenith 872, 860

LASER DISC BRAND AND REMOTE CODE(S)

ADS 880
Aiwa 855
Carver 853, 850, 858
Denon 851, 875, 849
Disco Vision 848
Funai 855
Harman/Kardon 853
Hitachi 848
Kenwood 877
Magnavox 853, 857, 875
Marantz 853, 850
Mitsubishi 849
NAD 849
NEC 879
Nikkodo 884
Optimus 849
Panasonic 856
Philips 853, 850
Pioneer 849, 848
Polk Audio 853
Quasar 856
RCA 881, 874
Realistic 855
Samsung 858
Sega 848
Sharp 873
Sony 854, 852, 878
Technics 856
Theta Digital 853
Victor 876
Yamaha 857

USING PIP (BASIC CONNECTIONS)

Picture-In-Picture (PIP) is the showing of two pictures on the TV screen at the same time (one main screen picture and one small picture, or PIP). This TV has two separate inputs (ANT[enna] "A" and PIP ANT[enna] "B") for your home's Antenna and/or Cable TV system signals. ANT "A" is referred to on screen as "TUNER-A," and PIP ANT "B" is referred to as "TUNER-B."

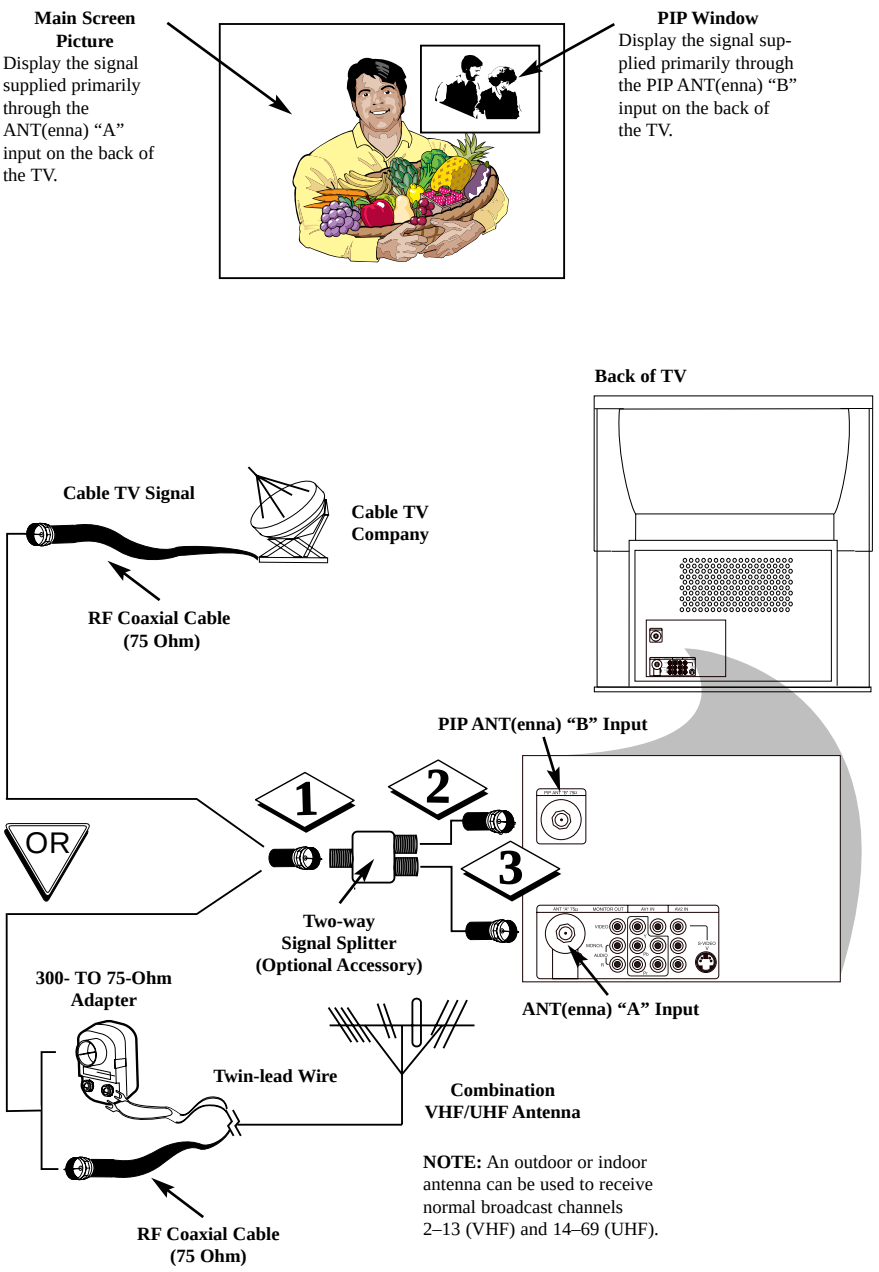
The ANT "A" input is primarily for the TV' s main screen picture. The PIP ANT "B" input is provided as a second dedicated source option for the TV's PIP "window" and its feature operations. *The signal connected to the PIP ANT "B" input can be either a split signal input (as described and illustrated on this page) or a separate external signal source (such as an additional home antenna, satellite dish system, or video accessory device).*

See the following steps on how channels connected to the PIP ANT(enna) "B" input can be shown and used within the PIP window.

BEGIN

1. **Use an RF coaxial cable** to connect a cable or satellite signal to the single 75-ohm input plug on a two-way signal splitter (not supplied).
2. **Connect two lengths of RF coaxial cable** to the two output plugs on the two-way signal splitter.
3. **Connect one of the RF coaxial cables coming from the two-way signal splitter to the ANT(enna) "A" input on the back of the set.** Then connect the other RF coaxial cable coming from the two-way signal splitter to the PIP ANT(enna) "B" input on the back of the TV.

Continue to the next page.


Main Screen Picture
Display the signal supplied primarily through the ANT(enna) "A" input on the back of the TV.
PIP Window
Display the signal supplied primarily through the PIP ANT(enna) "B" input on the back of the TV.
Back of TV
Cable TV Signal
Cable TV Company
RF Coaxial Cable (75 Ohm)
PIP ANT(enna) "B" Input
OR
1
2
3
Two-way Signal Splitter (Optional Accessory)
300- TO 75-Ohm Adapter
ANT(enna) "A" Input
Twin-lead Wire
Combination VHF/UHF Antenna
NOTE: An outdoor or indoor antenna can be used to receive normal broadcast channels 2–13 (VHF) and 14–69 (UHF).
RF Coaxial Cable (75 Ohm)

SMART HELP

If you need accessories to complete the described PIP connections, see your dealer or call our Parts Information Center at **1-800-851-8885.**

See pages 1, 2, 7, and 8 in the *Setup and Quick Use Guide* that came with your set and pages 53 and 54 in this manual for more information on connections.

NOTE: The purpose of the PIP ANT(enna) "B" input (referred to as "TUNER-B" on your TV screen) is to provide an easily connected, dedicated signal source for use with PIP. A split signal (as illustrated on this page) is not the only option in connecting to the PIP ANT(enna) "B" input. An additional outdoor or indoor antenna or a video game player, for example, could also be connected and displayed on the TV's PIP screen window through the use of the PIP ANT(enna) "B" input.

SELECTING THE PIP SIGNAL SOURCE

Now that you have completed at least a basic connection (as shown on the previous page), you are ready to use PIP.

4 **Plug in the TV and turn it on.**

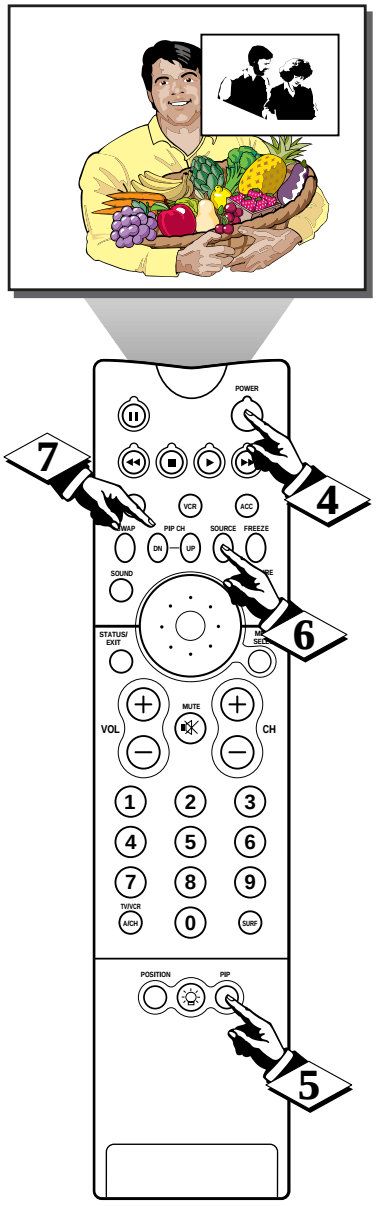
5 **Press the PIP button** on the remote control. The PIP window will appear in one of the corners of the TV screen.

6 **Press the SOURCE button** on the remote control to access the PIP ANT(enna) "B" input in the PIP window.

7 **With a dedicated signal source connected to the PIP ANT(enna) "B" input** on the back of the TV, you can **press the PIP CH(annel) DN/UP buttons** to change channels in the PIP window.

Details on the rest of the PIP remote buttons are on the next page.

STOP



SMART HELP

You can connect accessory devices to the AV1, AV2, AV3, and S-VIDEO inputs for viewing in the PIP window. (The Component Video Inputs cannot be shown in the PIP window.) After connecting accessory devices, simply press the SOURCE button to cycle through and choose a signal source to display in PIP. See pages 7 and 8 in the *Setup and Quick Use Guide* that came with your TV and pages 53 and 54 of this manual for details on, and examples of, accessory-device connection options.

USING THE PIP REMOTE CONTROL BUTTONS

Follow these steps to practice using the PIP buttons. You can change the size of the PIP window, reposition it, freeze its image, or swap its picture with the main picture.

BEGIN

1. **Press the PIP ON/OFF button** to show the PIP window. PIP appears in one of the four corners of the screen. Press the PIP ON/OFF button again to reduce the window size. Press the PIP ON/OFF button a third time to remove the PIP window from the main screen.

2. **Press the PIP ON/OFF button** to show the PIP window again.

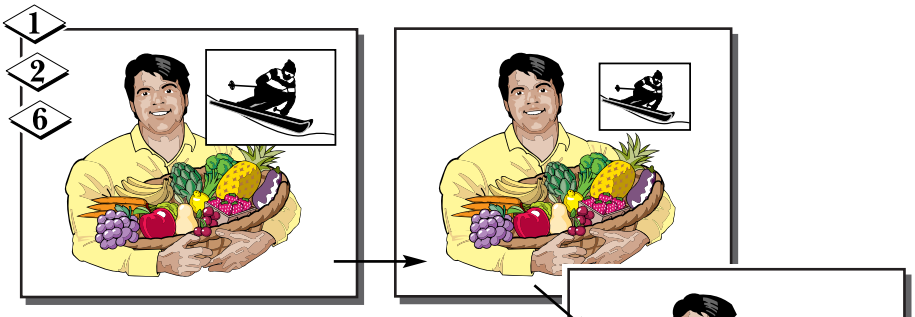
3. **Press the POSITION button** to move the PIP picture to any of the four corners.

4. **Press the FREEZE button** to stop the action within the PIP window. Press the FREEZE button again to resume normal viewing.

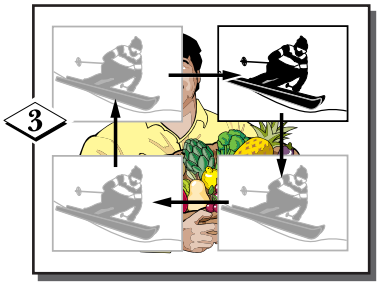
5. **Press the SWAP button** to swap the main screen picture with the PIP picture. Press the SWAP button again to return the main and PIP screens to their original positions.

6. **When you are finished using PIP, press the PIP ON/OFF button** twice to remove PIP from the screen.

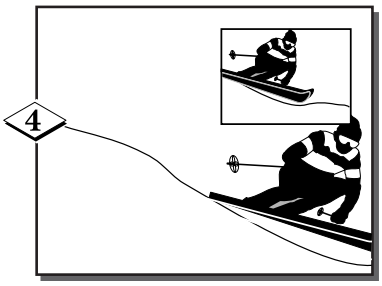
STOP



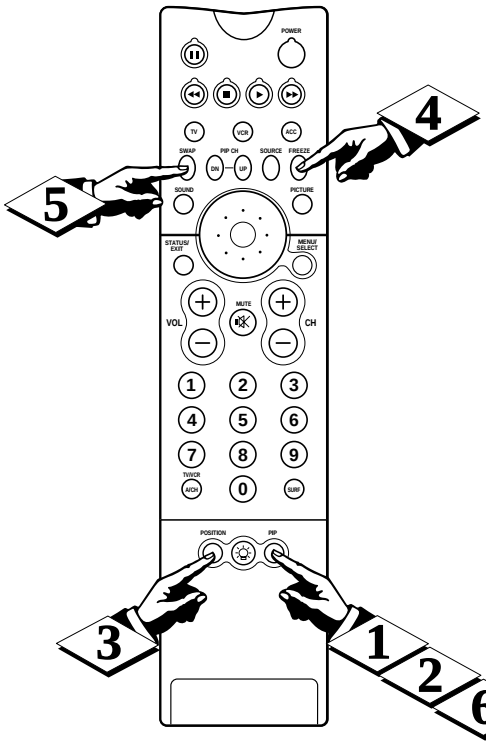
1. PIP ON/OFF

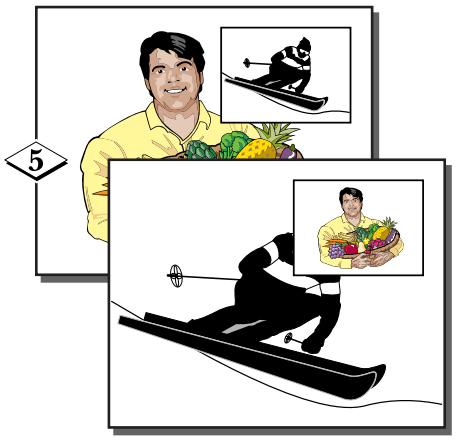


3. POSITION



4. FREEZE





5. SWAP

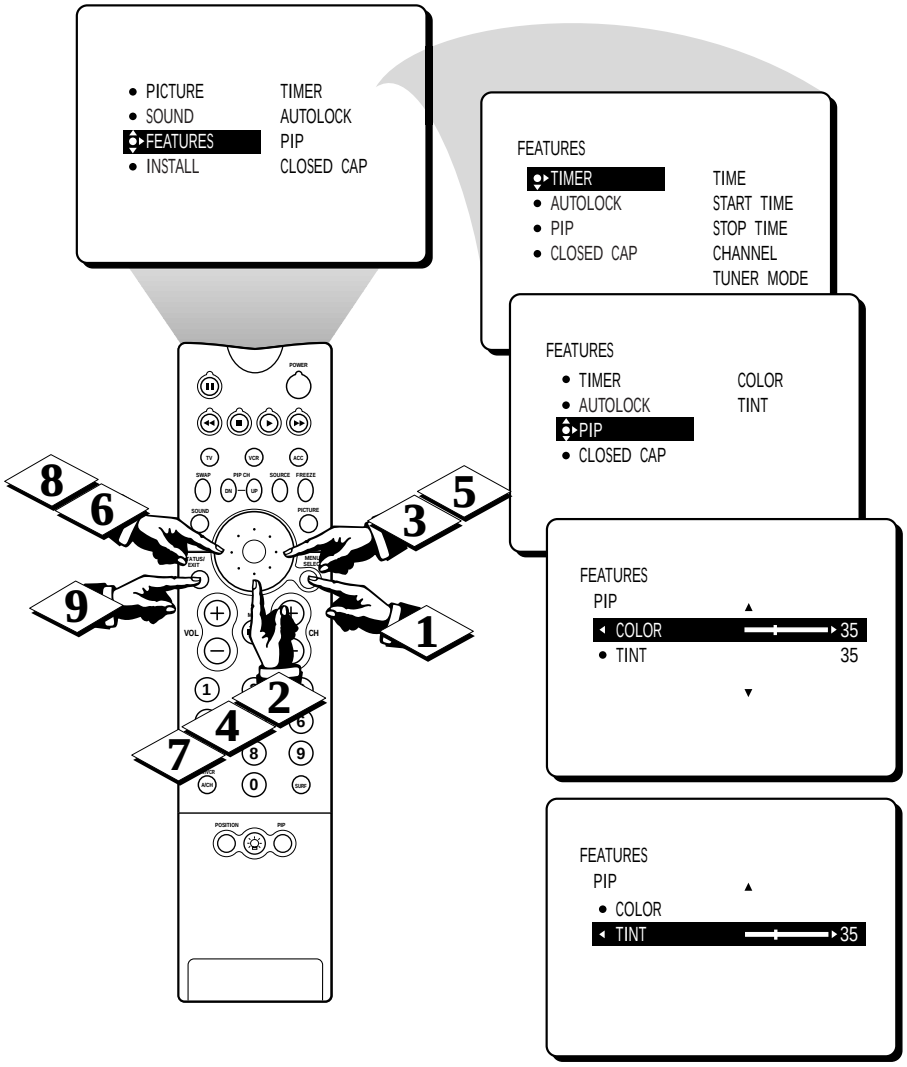
ADJUSTING THE PIP COLOR AND TINT CONTROLS

The Picture-in-Picture (PIP) COLOR and TINT controls allow you to make fine-tune adjustments to the PIP picture settings.

BEGIN

1. **Press the MENU/SELECT button** on the remote control to show the on-screen menu.
2. **Press the CURSOR RING DOWN** twice to highlight **FEATURES**.
3. **Press the CURSOR RING RIGHT** to enter the FEATURES menu.
4. **Press the CURSOR RING DOWN** twice to highlight PIP.
5. **Press the CURSOR RING RIGHT** again to shift the display to the COLOR adjustment bar.
6. **Press the CURSOR RING RIGHT or LEFT** to adjust the COLOR bar to the desired level.
7. **Press the CURSOR RING DOWN** to highlight the TINT adjustment bar.
8. **Press the CURSOR RING RIGHT or LEFT** to adjust the TINT bar to the desired level.
9. **Press the STATUS/EXIT button** to remove the menu from the screen.

STOP



USING CONNECTION OPTIONS

Cable Box/DBS • VCR • TV

Here is an example of how you can make a cable box • VCR • TV connection. .

BEGIN

1 Connect a cable TV signal to a two-way signal splitter.

2 Connect an RF coaxial cable to each of the two output plugs on the two-way signal splitter.

3 Connect one of the RF coaxial cables you just hooked up to the two-way signal splitter to the PIP ANT(enna) “B” input on the back of the TV.

4 Connect the other RF coaxial cable from the two-way splitter to the IN(put) on the cable box

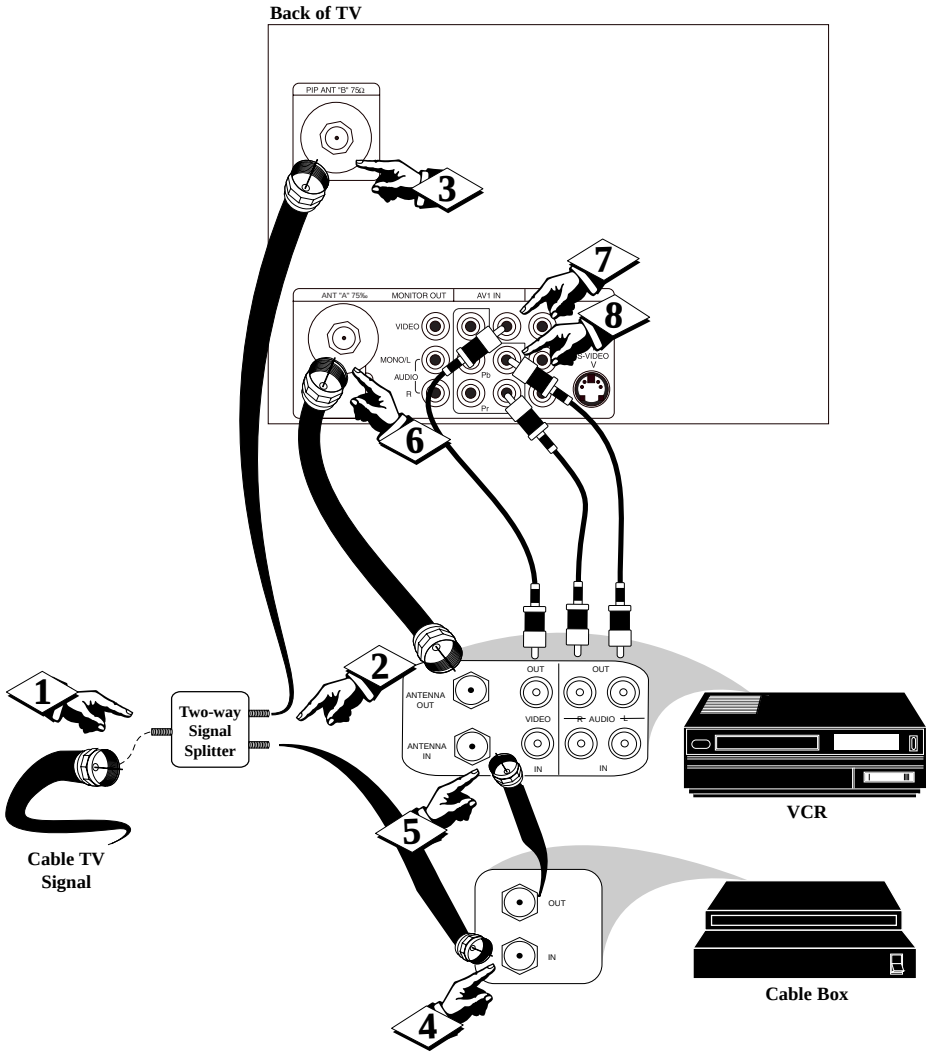
5 Use another RF coaxial cable to connect the OUT(put) on the cable box to the ANTENNA IN(put) on a VCR.

6 Use another RF coaxial cable to connect the ANTENNA OUT(put) on the VCR to the ANT(enna) “A” input on the back of the TV.

7 Use a video cable to connect the VIDEO OUT(put) on the VCR to the AV1 IN(put) for VIDEO on the back of the TV.

8 Use audio cables to connect the R(ight) and L(eft) AUDIO OUT(puts) on the VCR to the AV1 IN(puts) for AUDIO on the back of the TV.

STOP



SMART HELP

See page 43 for details on how to select the signal sources you have connected.

If you need accessories or parts to complete the described connections, contact your dealer, or our Parts Information Center at **1-800-851-8885.**

USING CONNECTION OPTIONS

Cable Box • VCR • DVD

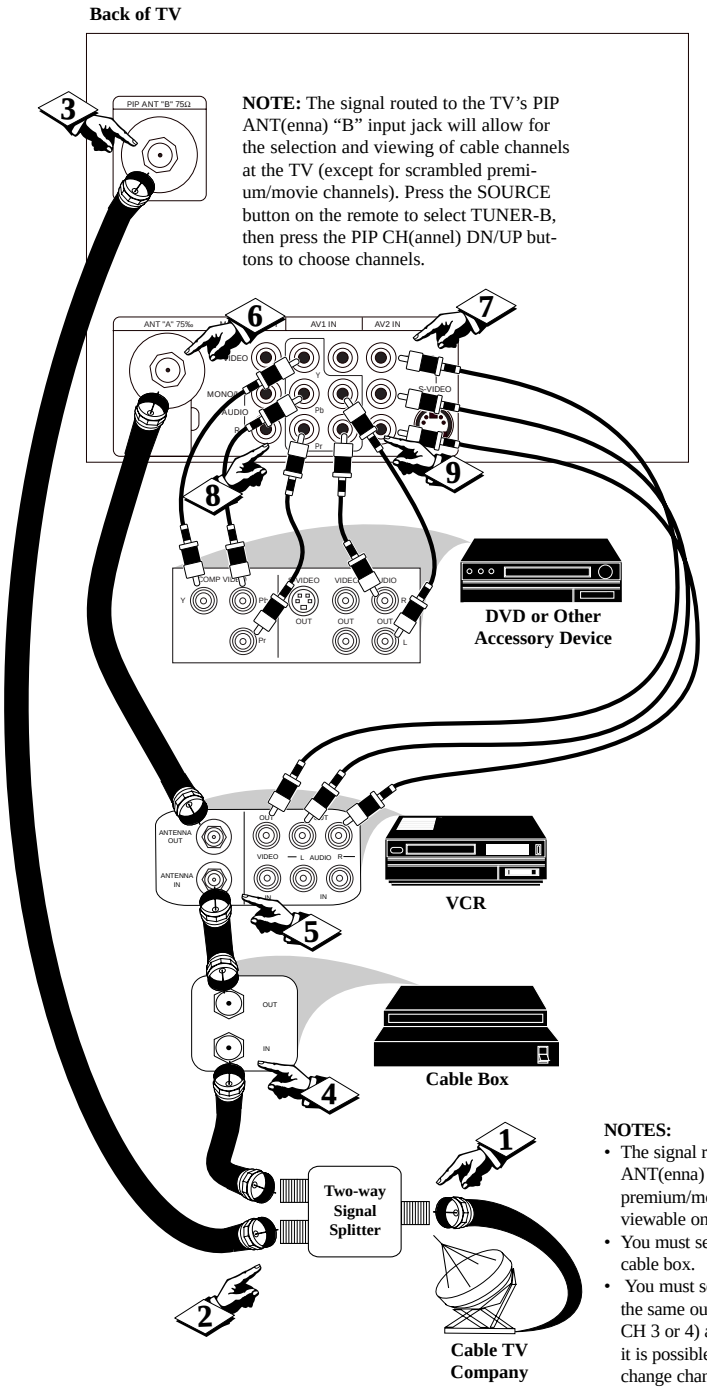
The example presented here includes the connection of a DVD or other accessory device to the Component Video inputs (labeled Y, Pb, Pr) on the back of the TV. Component Video provides you with the best possible color and picture resolution.

***NOTE:** The Component Video inputs signal is viewable only on the main screen, not in the PIP window.*

BEGIN

1. **Connect a cable TV signal t**o a two-way signal splitter.
2. **Connect two RF coaxial cables** to the two-way signal splitter.
3. **Connect one of the RF coaxial cables** you just hooked up to the two-way splitter to the PIP ANT(enna) "B" input on the back of the TV.
4. **Connect the other RF coaxial cable** to the IN(put) on the cable box.
5. **Use another RF coaxial cable** to connect the OUT(put) on the cable box to the ANTENNA IN(put) on a VCR.
6. **Use another RF coaxial cable** to connect the ANTENNA OUT(put) on the VCR to the ANT(enna) "A" input on the back of the TV.
7. **Use a video cable** to connect the VIDEO OUT(put) on the VCR to the AV2 IN(put) for VIDEO on the back of the TV. Also use audio cables to connect the AUDIO OUT(puts) L(eft) and R(ight) from the VCR to the AV2 IN(puts) for AUDIO on the back of the TV.
8. **Use component video cables** to connect the Component Video outputs (Y, Pb, Pr) on the back of the DVD to the Component Video inputs on the back of the TV.
9. **Use audio cables** to connect the AUDIO OUT(puts) L(eft) and R(ight) on the back of the DVD to the AV1 IN(puts) for AUDIO on the back of the TV.

STOP


Back of TV
NOTE: The signal routed to the TV's PIP ANT(enna) "B" input jack will allow for the selection and viewing of cable channels at the TV (except for scrambled premium/movie channels). Press the SOURCE button on the remote to select TUNER-B, then press the PIP CH(annel) DN/UP buttons to choose channels.
PIP ANT "B" 75Ω
ANT "A" 75Ω
AV1 IN
AV2 IN
S-VIDEO
DVD or Other Accessory Device
VCR
Cable Box
Two-way Signal Splitter
Cable TV Company

NOTES:
- The signal routed to the TV's ANT(enna) "A" input will allow premium/movie channels to be viewable on the TV.
- You must select channels at the cable box.
- You must set your TV channel to the same output channel (usually CH 3 or 4) as the cable box before it is possible to use the cable box to change channels on the TV.

SMART HELP

See page 43 for details on how to select the signal sources you have connected.

If you need accessories or parts to complete the described connections, contact your dealer, or our Parts Information Center at **1-800-851-8885.**

HELPFUL HINTS

If you are having difficulties with your product, check this list of difficulties and possible solutions before requesting service. You may be able to solve the problem yourself. Charges for TV installation and adjustment of customer controls are not covered under your warranty. If you need to call a customer service representative, please know the model number and serial number of your product before you call. This information is displayed on the back of the product. Also, please take a moment to identify the problem you are having, and be prepared to explain this to the representative. If you believe the representative will need to help you with operations, please stay near the product. Our representative will be happy to assist you.

CAUTION

The continual presence of nonmoving images on your TV screen can damage the picture tube.

A video source such as a video game, CDI, or TV information channel that shows a constant nonmoving pattern on the TV screen can damage the picture tube. When your TV is continuously used with such a source, the nonmoving portion of the on-screen image can become permanently fixed on the picture tube. When you are not using the video source, turn it off. Also, regularly alternate the use of such video sources with normal TV viewing.

Cleaning and Care

- To avoid possible shock hazard, be sure the TV is unplugged from the electrical outlet before cleaning.
- When you are cleaning the TV, take care not to scratch or damage the screen surface. Avoid wearing jewelry or using anything abrasive. Wipe the front screen with a cloth dampened with water. Use even, easy, vertical strokes when cleaning.
- Gently wipe the cabinet surfaces with a clean cloth or sponge dampened in a solution of cool, clear water. Use a clean, dry cloth to dry the wiped surfaces.
- Never use thinners, insecticide sprays or other chemicals on or near the cabinet, as they might cause permanent marring of the cabinet finish.

No power

- Check the TV power cord. Unplug the TV, wait 10 seconds, then reinsert the plug into the outlet and push the remote control power or TV power/standby button again. *The location of the TV power/standby button is illustrated on page *S-2.*
- Check that the outlet is not on a wall switch.
- If you are using an AC power strip, be sure the fuse on the power strip is not blown.

No picture

- Check antenna or cable connections to your TV. Be sure they are secure. *Details are on pages *S-1, *S-2, 49, 53, and 54.*
- Check the Tuner Mode control for the correct tuner setting. *Details are on page *S-5.*
- Try running the Auto Program feature. *Details are on page *S-5.*
- Press the AV button on the remote to ensure that the correct signal source is selected (Tuner-A, Tuner-B, AV 1, CVI, AV 2, or AV 3). *Details are on page 43.*

No Sound

- Check the volume buttons. *Details are on pages *S-2, *S-3, and 42.*
- Check the mute button on the remote. *Details are on page *S-3.*
- Check the Audio Out and Speaker controls. *Details are on pages 35 and 36.*
- If you are attempting to connect auxiliary equipment, check the audio connections. *Details are on pages *S-7, *S-8, 53, and 54.*
- If applicable, check the audio receiver for the correct operating mode. *Details are on page 36.*

Remote does not work

- Check the batteries. If necessary, replace them with AA heavy duty (zinc chloride) or alkaline batteries. *Details are on page *S-2.*
- Clean the remote control and the remote sensor window on the TV. *To locate the TV remote sensor window, see page *S-2.*
- Check the TV power cord. Unplug the TV, wait 10 seconds, then reinsert the plug into the outlet and push the remote power or TV power/standby button again. *To locate the TV power/standby button, see page *S-2.*
- If you are using an AC power strip, be sure the fuse on the power strip is not blown.
- Check to be sure the TV is not on a wall switch.

TV displays wrong channel or no channels above 13

- Select the channel again.
- Add the desired channel numbers into the TV using the Channel Edit control. *Details are on page *S-6.*
- Check to be sure the tuner mode is properly set.

**S* refers to the *Setup and Quick Use Guide* that came with your TV.

Glossary of Television Terms

Audio/Video Inputs • Connectors (RCA phono-type plug), located on the back of the TV, used for the input of audio and video signals. These inputs are designed for use with VCRs (or other accessories) to receive higher picture resolution and offer sound-connection options.

Closed Captioning • The broadcast standard feature that allows you to read the voice content of television programs on the TV screen. Designed to help the hearing impaired, Closed Captioning uses on-screen text boxes to show dialogue and conversations while a TV program is in progress.

Component Video Input • The input that allows the separate reception of blue, red, and luminance signals. Provides the highest possible color and picture resolution in the playback of digital signal source material, such as the kind available from DVD players. Allows improved bandwidth information not possible through composite video (A/V) or S-Video Connections.

Identify • The method by which a TV remote control searches and finds an operating code for another product (such as a VCR or a cable converter). After the code has been "identified," the TV remote control can operate and send commands to the other product.

Incredible Stereo (or Surround) • False acoustic management of the audio signal that produces a dramatic expansion of the wall of sound that surrounds the listener and heightens overall viewing pleasure.

Menu • An on-screen list of feature controls that are available for you to adjust.

Multichannel Television Sound (MTS) • The broadcast standard that allows for stereo sound to be transmitted with the TV picture.

On-screen Displays (OSD) • The wording or messages generated by the television (or VCR) to help you with specific feature controls (color adjustment or programming, for example).

Picture-in-Picture • The showing of two pictures on the TV screen at the same time (one main screen picture and one small picture, or PIP).

Programming • The process of adding or deleting channel numbers in the television's memory circuits. Through programming, the TV "remembers" only the locally available or desired channel numbers and skips over any unwanted channel numbers.

PTV • Projection Television. (Rear- and/or front-projection design systems are available.)

Remote Control Sensor Window • The window or opening found on the television control panel through which infrared remote control command signals are received.

RF • Radio Frequency or modulated signal design used as the carrier for television broadcasts.

RF coaxial cable • Used to connected a broadcast or cable signal to the TV. Also can be used to connect a VCR to the TV (or cable box or DBS).

Second Audio Program (SAP) • An additional audio channel provided for in the Multichannel Television Sound (MTS) broadcast standard. A monaural soundtrack included within the recorded or video signal (usually containing a second language translation for the displayed programming).

Status • Allows the user to quickly confirm what channel number is currently being viewed. Status can also be used to clear the TV of on-screen displays or information (rather than waiting for the displays to "time out," or automatically disappear from the screen).

S-Video Input • Signal input that allows direct connection of high-resolution video sources, such as satellite, DVD (digital video disc), S (Super)-VHS videocassette recorder, or video games. Provides improved picture resolution, sharpness, and clarity.

Twin–lead Wire • The more commonly used name for the two-strand, 300-ohm antenna wire used with many indoor and outdoor antenna systems. In many cases, this type of antenna wire requires an additional adapter (or balun) in order to connect to the 75-ohm input terminals designed into the more recent TVs and VCRs.

INDEX

alternate channel 40
antenna hookup *S-1, 49
audio out control 35
audio outputs 36
audio/video (AV) inputs *S-7, *S-8, 53–54
AutoChron control *S-6
AutoLock control
  access code 21
  blocking channels 22
  clearing 29
  movie ratings 23
  no rating broadcasts 27
  on/off control 25
  settings review 28
  unrated broadcasts 26
AutoPicture 38
auto program *S-5
AutoSound 39
av button 43
AVL (audio volume leveler) control 32
balance control 31
bass boost control 37
cable converter box connections *S-2, 53–54
cable TV hookup *S-1, *S-2, 49, 53–54
channel edit control *S-6
channel name control *S-7
clock (timer control) 13
closed captioning control 30
component video inputs (CVI) *S-7, *S-8, 54
connections
  accessory devices *S-7, *S-8, 53–54
  basic *S-1, *S-2, 49
convergence controls
  red/blue 9
  multipoint red/blue 10–11
  save multipoint settings 10–11
  undo multipoint 12
DNR (dynamic noise reduction) control 7
glossary 56
ImageMax 8
language control *S-5
name control *S-7
on-screen menu controls *S-4
picture adjustment controls 6
PIP (picture-in-picture)
  basic connections 49
  color and tint controls 52
  remote control buttons 51
  signal source 50
program list 40
registration/welcome 2
remote control
  battery installation *S-2
  button descriptions *S-3
safety/precautions *S-1,*S-2, 2, 3, 55
SAP (second audio program) 34
signal source options 53–54
sleep timer control 41
speakers control 36
stereo/mono control 34
super video (s-video) inputs *S-7, *S-8
surf button 40
table of contents 4
timer control
  activate 18
  channel selection 16
  clock 13
  start time 14
  stop time 15
  time display 19
  tuner selection 17
treble control 31
tuner mode control *S-5
TV buttons *S-2, *S-4
VCR connections *S-2, *S-7, 53–54
volume control 42
warranty 60

**S* refers to the *Setup and Quick Use Guide* that came with your TV.

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LIMITED WARRANTY